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# ITEMS OF INTEREST.

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## *Shots from the Profession.*

### The Treatment of Pulpless Teeth.

DR. D. CORMACK.

HERN'S burs should be used for imparting wide funnel-shaped openings to the canals; after this, a Gates-Gliddon drill should be passed into the canals for the purpose of removing the softened tissue from the more contracted parts of the canals.

Some operators are opposed to enlargement on the ground that great danger is run of either perforating the canal walls, or of forcing septic matter through the apical foramen.

The first objection is not an invalid one, for if care be not exercised roots may be perforated. This accident has twice happened to me, and I have met with a few cases among students. Should the perforation take place in the vicinity of the pulp chamber, the wall may be repaired with gutta-percha; but generally roots are perforated in the more inaccessible parts, and then extraction is necessary.

The danger of forcing septic matter through the apical foramen is, I think, an imaginary one, for I do not see how it can be possible, except in the teeth of very young patients, and such teeth had better be extracted.

On the other hand, if the canals be enlarged, the antiseptics employed will have free access to all parts of them, and at the same time the most troublesome part of the work is done away with. Again, softened tissue may be removed in less time than would be occupied in rendering them aseptic.

In treating pulpless teeth, care should be taken not to over-look any supernumerary canals, for if one be left in a septic condition, serious trouble may ensue.

#### ABNORMALITIES.

Supernumerary roots occur most frequently in molars of the lower jaw, but also in other teeth, notably third molars. In bifurcated cuspids they are sometimes met, and rarely in bicuspid with their roots.

The anterior roots of first lower molars are always pointing forward, and have dumb-bell shaped canals.

It will seldom be advisable to attempt to save pulpless third molars, for these are generally so inaccessible, and the number of their canals so uncertain, that there is generally failure.

Some third molars, however, may be made to do good service for many years.

Upper first bicuspid sometimes are very troublesome, but if a Donaldson's bristle cannot be introduced into the small roots there is little fear of an unfavorable result.

Gates-Gliddon drills are sometimes broken into the upper ends of root canals, and removed with difficulty.

I have several times failed to remove portions of drills from roots, and filled the canals in the usual way, regardless of their presence. The portions thus left in, do not, I think, act prejudicially to the success of the operations, and they certainly form a root-filling, the density of which cannot be surpassed.

After the canal walls have been entirely freed from softened dentine, the use of antiseptics should be commenced; those generally employed being iodoform, and

oil of eucalyptus. They are generally applied by moistening a few fibres of cotton wool, which have been previously wound round a smooth broach, then dipping the broach, with the wool still round it, into iodoform, and carrying the whole into each of the canals, the broach only being removed, and the cavities sealed with gutta-percha. After the dressings have been allowed to remain in a tooth for a week, they should be removed, and fresh ones applied, the cavity being sealed with gutta-percha as before. This is a very good method, and it is the one adopted by the majority of conservative dentists, but it is found in practice to take too long, three weeks usually being spent over a single tooth.

#### IMMEDIATE ROOT-FILLING.

Tho a practice cannot be conducted successfully if only one method be known to the operator, I think the immediate method will generally be found more effective than the method I have just described. Not only may a tooth be treated and permanently filled in less than an hour, but also the teeth on this method seem to give fewer failures, if a proper root-filling be employed.

Apply the rubber-dam and wash with alcohol, working it in with a Donaldson's bristle. When the alcohol has been allowed to remain in the canals for a few minutes, remove, and use peroxide of hydrogen. This should be worked into the canals in the same way as the alcohol, and many applications should be made. During the time this is in the canals, the cavity will become bleached; continue its use till frothing ceases, usually twenty minutes.

Hot air, and hot instruments should now be applied to the canals so that the dentine may become quite dry to more readily absorb perchloride of mercury (1-200), which is next applied. This must be worked into the canals in the same way as the alcohol and peroxide of hydrogen. When it has remained in the canals for a few minutes the canals should be again dried with hot air and hot instruments. Hold the nozzle of an air syringe in the flame of a spirit lamp till red-hot while air is passing into the bulb. When the dentine of the canals is quite dry, fill the root.

If the canals be thoroughly filled with a mixture of ortes and beta-naphthol, there is nothing left that could be desired.

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#### Early Dentistry:

DR. J. A. ROBINSON, JACKSONVILLE, MICHIGAN.

THE first set of artificial teeth I ever saw were worn by Dr. Baker himself. They were made of calf's teeth and the teeth of sheep fastened on a piece of thick leather, and worn under the upper and under lips, and were only worn for show and taken out of the mouth while eating. He also made some sections of six or eight front teeth out of bone that were tied in with ligatures to the back teeth. A thigh-bone of an ox was boiled and scraped, and a section sawed off about the length of the natural teeth and of the size to fill the place of the missing teeth, and tied in with a silk cord, after being filed down into sections to resemble the teeth. About a year after Dr. Baker's visit to Concord came a Dr. Dewar, of Boston, a French dentist, and he brought with him human teeth, said to have been taken from the battlefield of Waterloo, and preserved in alcohol, and set them on the roots with a wooden pin or dowel. This was about A. D. 1828. There were no dental instruments to be bought, and, of course, they were all home-made, by the blacksmith, or some general tinker who makes everything in a small town. As I had poor teeth for a boy, and was something of an expert in the use of tools, having learned to make the wheels and pinions of watches and to temper steel, I was employed to manufacture Dr. Dewar's dental instruments, or tools, as they were called at that time. I got shoemaker's awls to make the small excavators, pluggers and burrs, and put them into ivory or wooden handles, and made a sort of outfit for Dr. Dewar in that way, and he filled my teeth for doing the work. I spent a good deal of time with Dr. Dewar, and saw him set a good many human teeth on wooden pivots. After Dr. Dewar left

Concord, and went back to Boston, I began to make a few partial sets out of bone, and got some sea horse tusks, as it was finer ivory, and I made several small pieces for the toothless women in the town, that did good service for years. I also made quite a respectable turnkey that I have in my possession to-day. There was no instrument for extracting teeth but a turnkey, and Flagg's forceps were invented and first used about 1832 or 1833, and were not put on sale till 1836. In the financial crisis of 1835 I began dentistry by reading medicine with Dr. George Mansfield, of Lowell, Massachusetts, who was a pupil of Harwood & Tucker, Hamilton Place, Boston. Mansfield was an M. D., and had not been in practice long at dentistry. The only dental work was Bell on the Teeth.

As my former business and little experience in dentistry had prepared me somewhat for a change in business, and the use of tools and working in gold and silver and other metals had given me some experience in tinkering and doing almost every thing, I soon became a strong help to Mansfield, as he made artificial sets of teeth on gold and silver plates, so at the end of the year he complimented me by saying to old Dr. Flagg that I had taught him more than he had taught me. My contract with Mansfield for instruction was to be two hundred and fifty dollars. One hundred and fifty I paid on entering his office, and to show his appreciation of the service I had been to him he gave me the one hundred dollars due as a donation.

While with Mansfield we began the manufacture of mineral teeth after the plan of the old Stockton tooth, which was a compound of pipe clay, ground to impalpable powder, and feldspar for the base or body, with enamel of feldspar and a little chalk, and shaded or colored with titanium for yellow, and cobalt for coloring of blue enamel for the cutting edges of the teeth. These teeth were very strong, but very opaque, and resembled white beans about as nearly as human teeth. It will be unnecessary for me to go all through the series of experiments we made before we found a translucent material to make a tooth fit to be worn. The best material was selected from a pile of paving-stones. It is enough to say that it involved stones out of the street—a small boulder of conglomerate quartz—a good deal of hard labor in grinding, and feldspar—a sort of graphite granite that was vitrified—the material and coloring for the enamel that was ground fine and powdered in lead molds.

My attainments in carving block work I gained by studying natural models. With an old skull in my hands I sat for hours and hours studying the form, shape and size of the human teeth until I understood the organization, articulation, form and size of each individual tooth of the upper and lower jaws. This was good discipline, for every thing is dual, and we all have to make whatever we desire to make perfect within ourselves first, before we can reproduce it outside of ourselves. So the whittling propensity and practice of my boyhood was useful to me when I wanted to make teeth, or models for molds to manufacture block work or single teeth. As I began dentistry with a horse and wagon, and traveled from house to house, and from town to town, I was astonished at the amount of secrecy that was demanded of me from my patients. Almost every one exacted a promise from me that I would not let it be known in the neighborhood that Mrs. or Miss A or B had a false tooth, or a set of teeth, and even when I settled in Old Salem, Massachusetts, many times, ladies have refused to give me their names for the appointment, saying: "Now, please don't mention to any person that I am having any new teeth, for I would not have any one know it for the world." And these same persons would come disguised, or with a thick veil to cover the face, to see the dentist for fear of being seen, or ask if they could not come in by the back door. In the summer of 1836 I made an upper set of teeth for the mother of Ralph Waldo Emerson, who was a relative of my mother, and I made the *plate* out of a section of ivory I got at a piano factory in Boston. I got an impression in beeswax and filled it with soft putty, dried it thoroughly, and that was the only model I had to make the inside of the plate fit the mouth. I cut out the plate on the inside with chisels and small gouges, and used a pigment of red lead to guide me as to the shape, and the irregularities and depres-

sions ; then I filed down the outside of the plate to about one-quarter of an inch in thickness, and set on the ivory plate ten *human teeth* with wooden dowels, and this plate was worn up to the time of her death, and gave good satisfaction. Of course the fit was very imperfect, but as Dr. Flagg used to say, if the patient could answer questions in monosyllables without the plate coming down into the mouth it was all he could expect.

While going about in the towns in search of business, if I found a patient in a tavern, I made a dental operating chair by standing on one foot and placing the other foot in a chair back of the person, and resting his head against my knee to steady it, while I cleaned and filled his teeth, and if I visited the house to work for the women folks, I sat down on a low cushion and had the persons sit on the floor and place their heads against my left arm for a head rest, while I operated on their teeth.

Sometimes my lady patients would remark that this was "a very awkward and singular position to be placed in" to have their teeth fixed, but as we had no other conveniences, it was made to answer the purpose of the dental chair.

In making partial sets of teeth out of bone or ivory, we paid no attention to the articulation, but left a shoulder on the under side to touch lightly on the lower teeth, and if there were any number of back teeth it was the rule not to have the block of the bone touch the lower teeth at all.

Dental operations at that time were purely mechanical. The only regulation was to extract superfluous teeth and give nature an opportunity to correct herself. It was the Harwood & Tucker plan to extract alternate bicuspid and molars that were badly decayed, to make a good free opening to fill an adjoining tooth, saying that ten to twelve good, sound and healthy teeth were more useful than a full set of artificial teeth, and it was more practical than to try to fill teeth that were of a doubtful character, and their establishment was the leading dental place in Boston.

As dentistry was purely a mechanical attainment in the beginning, professional etiquette was unknown, and the dental laboratory was a sealed enclosure, a secret place with "*No admittance*" placed over the door.

There was a few men in Boston who visited together and compared notes, and showed samples in the study and improvement of the manufacture of "mineral teeth," but when Dr. Harwood succeeded in producing the best samples he differentiated, as the scientist would say, that is, he refused to divulge his secret, and branched off to himself, and that broke up the institution.

I gained admission to Harwood & Tucker through Joshua Tucker, who married a Miss Morse, of Winchendon, and her brother, Milton Morse, married my cousin, so Tucker said I was his cousin and could come in.

It is a hazardous task to light up the coldness and treatment the country dentist received from those dentists who were well situated in Boston fifty years ago. As I stated before, dentistry was purely mechanical, and the evolution in mechanics is the new method of the old plan that was true. This can be illustrated by the germ of the original pivot-tooth as compared to the Richmond crown, or the dental engine compared to the old method of finishing fillings, or taking impressions in plaster instead of beeswax, so the fit would be perfect enough to dispense with the gold spiral springs for full sets of teeth to keep the upper and lower dentures in place. Difficulties always suggest remedies, a profession grows higher and broader as we grow and improve in intelligence and culture.—*Dental Register*.

EDITOR ITEMS OF INTEREST:—A good method for holding a broken rubber plate in position, while it is being waxed up, is to take a round tin box four inches in diameter and two inches deep, with a perforated bottom. Fill this box nearly full of very fine shot. Place the pieces of broken plate in position as they should be ; then press down into the shot, drop on the hot wax, and hold box under stream of water to cool. The water will run out through perforations in bottom.

Jacksonville, Fla.

F. E. BUCK.

## Some Practical Points in Operating on the Proximal Surfaces.

DR. SANFORD G. PERRY, OF NEW YORK,

Before the Pa. Odontological Society.

THE ideal filling on the proximal surface of a bicuspid or molar is one large enough on close inspection of its margins to be in sight, and thereby safe from capillary attraction on all sides except along the cervical border, but not large enough to be seen by the non-professional observer, nor go under the gum, nor tend to weaken the great arch that connects the two domes or cusps of the teeth. It must not be filed or finished down to a flat surface, but in outline it must follow the contour of the original tooth.

On such a protected surface decay is no longer possible, and it is not too much to say that such a filling leaves the tooth safer than if it had never decayed and been filled. This filling is one that can very often be made. If the decay is slight it will not be easy, and if the teeth are of good structure it will not be advisable to get the free margin. If it is extensive, it will not be possible to save the great grinding surface arch.

The manner in which I make this ideal filling is by applying the dam, adjusting a separator—of the two bar pattern generally, as they are more out of the way—and commence to turn the screw, giving a few moments' rest between each effort. I then select the direction from which the filling will be introduced, and shape the outlines of the cavity in accordance with this general plan. If I enter the cavity from the coronal aspect I am very careful not to cut away very much of the grinding surface arch. If from the lingual side, I cut the opening rather freely to reach the cavity and to have the filling reach well out on the lingual side, where its borders will be swept clean by the friction of the food and the washing action of the fluids of the mouth.

Those cavities are not so easily reached and filled from the lingual side, but by the aid of large mouth mirrors the work is greatly simplified, by standing erect over the patient and working by reflection.

If I decide to enter from the buccal aspect, I cannot cut so freely in entering the cavity, unless it is on the posterior surface, because of the danger of making a filling that would show. But tho I feel constrained to make a smaller opening, I have the advantage of being able to fill directly and easily into the cavity.

These cavities I prepare with the smallest burs when the engine is used, and with delicate excavators of the spoon variety, that are made with very flat and narrow shanks, and with such peculiar curves that every part of the cavity is easily reached. The idea of these flat shanks, which is embodied in both the excavators and pluggers I use, is one I got from Dr. Darby. As will be easily seen, it gives the greatest amount of strength to an instrument that can be used through the narrowest space. Unless formed by decay, I make the under cuts in all cavities of this class very slight. I make a retaining pit at the distal end of the cavity, and then proceed to fill with the very delicate pluggers here shown. Most of these pluggers swell at the ends in form of a bell. The ends are flat and have serrations as fine as can be made. For many years I have used pluggers with this peculiar swell at the ends for all forms of cohesive and semi-cohesive gold. They are particularly well-suited for crystal gold, of which I use a great deal. This form of point runs through many of the pluggers I use for hand pressure, the automatic, the mechanical, the electric, and in heavier forms for the hand mallet. The shanks of some of the smaller are so slender that they can be used with the utmost precision through very narrow spaces.

By the use of these delicate cutting and filling instruments, cavities can be prepared and filled from the grinding surface without impairing the strength of the great arch, or from the buccal side without bringing the gold out so that it can be seen except on close examination. In nearly all cases this can be done by the use of the separator without previous wedging. If I can get space enough to allow a

strip of thin sand-paper to pass between the teeth I can generally fill them so that when the separator is removed and the teeth have returned to their places, the edge of the filling can be just seen on all sides except along the cervical border.

If the teeth are very soft and predisposed to decay, even small cavities, when properly prepared, are likely to become large enough to allow these free margins of the fillings. If the teeth are good, it is not necessary to get these free margins, tho it is well to do so on the lingual and buccal side if too much cutting is not required. Occasionally teeth will be met where the conditions are all so favorable it is not necessary to get a free edge on either side. To cut out the decay and to fill them accurately will be sufficient to make them safe indefinitely.

Through many of these narrow spaces I use Watts' crystal gold in very small pieces. It is a wasteful way in which to use gold, for many of the pieces will be drop or injured before getting them in the cavity through so narrow a space, but this gold stays where it is fixt and is so soft and adjustable, and works so beautifully if used with these bell-shaped pluggers, that I often waste time and gold to get the fine result that can be had, as I think, in no other way. Undoubtedly, strips of soft or cohesive gold are more easily used through these narrow spaces; but the soft gold does not always stay where it is placed in such shallow cavities, and the cohesive gold is too hard and stiff. The crystal gold occupies a medium position between the two, and possesses the best qualities of both. Nearly all my professional life I have used crystal gold variably, and I have never seen any reason to distrust it. It is not, however, a gold that will give good results unless it is worked with great care. Every piece must be fixt and condensed before another piece is added. If used in this patient way, not much force is required, and an absolutely certain result may be expected. I am satisfied that those who have failed with it have used it in too large pieces and have expected to get on too rapidly with it.

Some of the small cavities in the back teeth I fill with amalgam, and generally with very good results. I have noticed a slight waste of the surfaces of some of my copper amalgam fillings, and I could not tell if it was due to mechanical wear or to a disintegration of the surface by galvanic or chemical action. If to the latter, these sheltered surfaces may not prove favorable to them.

The advantages of this ideal filling are, that the shapes of the teeth are perfectly kept; the great arch of enamel that binds the two cusps together is not broken, and yet, by extending from the lingual to the buccal side, even if not to a free edge on the grinding surface border, the vulnerable part of the tooth is completely protected. It is well known that decay generally begins just above the point of absolute contact—in fact, on the surface that would be covered by such a filling as this. Still another advantage is, that the gum is not disturbed in the least. At the cervical border I do not cut under the gum as much as formerly. I leave the diminishing enamel, whenever it can possibly be left, for I can never hope to carry the filling under the gum and finish it so as to get quite as good a condition of this easily-inflamed tissue as when it rests on its native enamel.

It must be remembered that in packing along the cervical border, the force is applied directly against the enamel edge, and if it is always done by gentle hand pressure and with soft forms of gold, the enamel, which grows so thin as it goes under the gum, would not be shattered and destroyed, as it is almost certain to be if the mallet and cohesive gold are used. The delicacy of the small pluggers will indicate how gentle this pressure must be, as much force would be certain to break them. I have them made delicate partly to insure this careful use of them along this border.

There are some very interesting facts grouped about this ideal filling, and I cannot resist the impulse to sound the alarm in reference to a method of making these fillings, which, like the practice of making permanent separations, is full of temptations and dangers. I refer to what I have already alluded to and condemned—the habit of cutting boldly down from the grinding surface to get at the



cavities, and to be able to fill them more rapidly and more easily. As with permanent separations, tho in nothing like the same degree, I speak with sad experience of this practice. In that early period before alluded to, I used the Varney pluggers for most operations, and, as they are nearly all straight instruments, with heavy shanks, it was necessary to open freely into all cavities to be filled with them. It was also my habit, then, to use more cohesive gold than I use to-day, and, of course, this necessitated a free, wide opening into all cavities. The result of this practice was, in the first place, a great deal of cutting, and, in the second place, a great deal of filling; and then a great deal of finishing. And after it was all done, tho there was great strength and promise of durability, there was a great mass of gold and an artificial condition that was not pleasing to contemplate. The result of that practice leaves many bicuspidis filled on both proximal surfaces, the great arches gone, the fissure between the two fillings filled, and the great domes of the cusps standing alone, greatly weakened and ready to split off if a shot from a game bird or a splinter of bone from a chop is caught and wedged between them by the sledge-hammer blows of the lower jaws. The enamel does not coalesce in the fissure, so that the strength lies in what I will call the enamel rim around it. If this rim is cut, as is generally done in filling even small cavities on the proximal surfaces, much strength is irretrievably lost, and the first step in the downward course of the tooth is taken.

In these days of matrices there are great temptations to cut through this rim, even for the filling of small cavities.

Separators, with all their possibilities for good in careful hands, must also come in for a share of blame here; for as men abandon the habit of preliminary wedging and depend on the separator, in addition to the slight space that can comfortably be made with the screw, there is the temptation to take a little off from the grinding surface border of the tooth to reach the cavity and complete the operation at a single sitting. This is an ever-present temptation, and is so potent, that with firm teeth I often guard against it by still resorting to slight preliminary wedging with tape, two or three days before operating.

If the cavities are so large that this rim cannot be saved nor the ideal filling made, then, of course, there is no escape from cutting boldly to and including the fissure. Generally, if the fissure is reached, it is best to cut it out to its extremity and fill it in connection with the proximal surface. If left unfilled, it may cause a leak that will undermine the whole proximal filling. For some years past it has been my practice to save this coronal arch whenever it was possible, even if it involved more work and more care. With children, it is very common with me to open the permanent teeth with a separator, and, cutting out the decay with my delicate instruments, fill them with red gutta-percha, expecting to wait till the teeth have become more dense and in better condition to receive permanent fillings. It is sometimes surprising to see how many years these little ones will last on these sheltered surfaces, and without danger of wedging and displacing the teeth from the expansion of the filling, as there is so little of it. It is also surprising to note how the teeth improve in the meantime. But if the cavities are large, this is often a wretched practice, as the expansion of the gutta-percha displaces the teeth, and will give all the annoyance of those made by permanent separations. I have seen a few instances with adults where the teeth never returned to their proper place, and, being beyond the reach of exaggerated contour fillings, gave no end of permanent trouble. If the proximal cavities are large and I desire to use, for children or adults, a plastic other than amalgam, to avoid the above danger I use a little gutta-percha—sometimes amalgam—near the gum and fill the rest of the cavity with oxyphosphate. This method of treating proximal surfaces, first undertaken to carry patients over the spring till autumn, or from the holidays till the summer vacation, has so often exceeded my expectations that for many years I have adopted it as one of my means for regular and somewhat permanent treatment for young, soft teeth, and for frail and crumbling teeth of any age. If senile conditions exist, I resort to it constantly.

If there are dentists who make permanent separations because they doubt their own ability to make lasting contour fillings of gold, I think they would do better for their patients by adopting this plan; for by it they could easily preserve the shapes of the teeth.

It will sometimes happen, in opening into a cavity from the buccal or lingual aspect to save the coronal arch, that a very thin matrix of steel, platina, or German silver, can be used to great advantage when adjusted and tied. If the opening into the cavity can be a large one, this matrix is nearly perfect; but if the opening is small the matrix, however thin, takes up room, and is an obstruction rather than an advantage.

It can be sometimes used to very great advantage in filling good-sized cavities with soft gold in the molars, where it is desirable to save the coronal arch. For amalgam, gutta-percha, or oxyphosphate in these places it is indispensable. Also for filling the proximal surfaces of the incisors with any material when the cavities are opened from the under side it is of the greatest value. The packing of crystal gold, No. 1 or 2, by hand pressure, into a cavity so prepared, standing upright over the patient, and using a reflecting mirror, is an operation that gives me more pleasure than any other operation in dentistry. It is the easiest, as it is the most accurate way, in which such a cavity can be filled. The matrix prevents the possibility of the instrument slipping through, and the gold can be packed against the enamel borders to satisfy the most exacting. The bell-shaped points and nearly right angle curved instruments work to perfection here, as in many other cavities. The form of the tooth is kept, and when the matrix is removed but little finishing will be required. A thin, flat, highly-polished burnisher rubbed on a moist piece of soap, and carried with a firm hand along the edge of the filling, will leave a margin that will make one bless the day when this beautiful form of gold was produced. I could almost honor Dr. Dwinelle as much for the share he had in discovering and producing this form of gold as for the pictures engraved by his own hand illustrating, in the old *American Journal of Dental Science*, his early contour fillings. In fact, I do not know but that the two are so interwoven that they should be grouped together when placed to his credit. I do not think crystal gold is suited for a hasty, careless operation; but for one who aims to be a fine artist in filling teeth it is, in my judgment, the most perfect form of gold ever produced. But the care necessary in its use will make a good filling of almost any kind of gold; and, after all, it is the result we should care for, and not the individual preference of the operator, or the manner in which the final result is reached.

When the decay on the proximal surfaces of bicuspid and molars has gone so far that the great arch cannot be saved, and the cavity must be opened from the grinding surface, the question of using a matrix is the one first to consider.

### How Would You Like the Chinese Way?

A CHINESE correspondent says: The more I study Americans the more I am convinced that they are mentally diseased. Instead of doing every thing in a common-sense manner, they try all they can to do it in the very opposite way. At home, for example, you and the other members of your Mutual Health Association pay Dr. Wun Lung and his assistants a liberal salary to keep you all well, and pay nothing when you are sick. On this account, he and his young men work very assiduously in regularly calling and examining every member in the union, and all of you enjoy comparative immunity from illness. Here, in New York, a physician is paid for by the amount of your sickness, and the less able you are to earn money, the larger and more onerous is his bill. As a result, many doctors, I am told, yield to temptation and keep their customers sick. The consequence is, that those who have the most sick and dying are the richest, most esteemed and influential, while in China they would be ostracised for such practice.—*Med. Brief.*

## The Professional Spirit.

(Editorial in *Cosmos*.)

CONSIDERABLE attention has recently been given to a consideration of what constitutes and illustrates a "truly professional spirit." The discussion has taken a wide range, incidentally revealing curious phases of thought. According to the ideas of some, membership in a profession may be expected to work a radical transformation in individual character, to impart a regenerating power, to elevate to a higher moral plane. The professional spirit and the trade spirit have been held up in contrast as tho essentially different: the one being designated "a heavenly spirit," the other an "evil nature;" the one developing "such a consideration for the interest of others as to lead one to prefer the good of another to his own benefit," the other inspiring an effort to "secure the good of the individual to the disadvantage or the injury of others."

It is, of course, every way desirable and commendable to establish and maintain codes of ethics—laws of association—in the various pursuits of life, by which, through a common understanding and agreement, frictions and misunderstandings may be avoided and mutual helpfulness secured. It is not worth while, however, to invite criticism by claims which are manifestly untenable.

A high standard of qualification and of character is desirable in any professional pursuit. The vocation of the clergyman, the physician, the attorney, the teacher, each suggests special fitness for the special calling; presupposes a greater breadth of culture than that of the average tradesman or manufacturer, and certainly carries an implication of moral worth. Every professional man, as Bacon quaintly expressed it, "is a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

If every diploma were a guarantee that its holder were truly learned in his profession, it would be no mean claim to the respect and confidence of the community. If, in addition, it were an assurance of high moral character, of pure motives and worthy ambitions, it would constitute a veritable patent of nobility.

Unfortunately, facts do not justify such estimate. While in every profession there are splendid examples of admirable fitness in all respects for the chosen calling, there are in each and all those whose unfitness is apparent from every standpoint. To improve and elevate one's profession; having attained for one's self the requisite qualification, to inspire like effort for like result in others, is a worthy professional ambition, and it is in such efforts that a "truly professional spirit" is manifested. But it is useless to claim broadly a higher moral tone, or more unselfish motives among professional men, than exist in other callings or pursuits. To do so is simply to invite ridicule. It is folly to expect serious consideration of the claim that so far as the relation of the professional man to his patient is concerned, there is an absence of the desire and expectation of profit from the relation on the part of the professional man which broadly distinguishes and differentiates his motives from those of the tradesman or artisan. The contrasting of the professional spirit with the trade spirit, and the attempt to make it appear that there exists a greater freedom from the love of gain in the former than in the latter, will not be accepted at this day. The average man engages in farming, in manufacture, in banking, in trade, in the practice of law, medicine, or dentistry, in the hope and expectation of thus providing for himself and those dependent on him, if not of also acquiring a competence. It is right that it should be so; the laborer, in whatever field, is worthy of his hire. To remove the hope of pecuniary success in any department of human effort would be fatal. The reward of labor is the prime incentive to work; and in every vocation, including the professions, suitable compensation for work done is rightly and reasonably expected. \* \* \* \* \*

The public is quick to recognize and to appreciate professional qualification and worth; equally quick to recognize, and to estimate at their true value, assertions of

superiority, whether in the possession of a heavenly spirit or of superlative knowledge or skill. Cant, religious or professional, is always distasteful. "I am holier than thou," is said to have provoked Omnipotence. The essential spirit of cant is an assumption of superiority,—always offensive, sure to awaken a feeling of resentment in human nature, to destroy confidence and weaken influence.

### The Use and Abuse of Amalgam.

J. R. OWENS, D. D. S., CLEVELAND, O.

**A** BRIGHTER day is dawning. Justice is being meted out to this much abused but useful servant to mankind. The vail of prejudice is being lifted, and truth-seekers are beginning to see that the material is not at fault so much as the manipulator. New unprejudiced men are coming to the front, who see alloys of certain metals, amalgamated with mercury, when properly treated, in skilful hands and good judgment to prepare the tooth and insert the amalgam in the cavity, is only excelled at any time by the best worked gold fillings. In many cases will give better service than skilfully wrought gold fillings.

There are a great variety of these alloys. The aim in them all is to get a material in which one metal will expand to an equal extent that another, that is used, contracts, thereby getting an alloy which, when amalgamated, will remain the same in volume when crystallized as when it is inserted into the cavity. Another thing to be desired, is such a combination which, when crystallized, it will have sufficient density and cohesive or edge strength; and lastly, such a combination as will resist oxidation as much as possible. It is admitted that to get all of these qualities in one alloy is difficult. But it has been approximated in several preparations brought to the profession.

What are the merits and demerits of amalgam, then? It is a plastic substance which is easily manipulated. It does not require a high grade of skill to use it, and a cavity is quickly stopt at a comparatively small cost of time, labor, and money. The density is entirely sufficient to withstand the wear on it, and if the filling is polished several days after insertion (as all should be) it is not conspicuous in color.

The decay should be thoroughly excavated of all materials, amalgam will admit of the least slighting in that direction. Do not as a rule make pits for the retention of the filling in the cavity, nor grooves, unless necessary. Instead of beveling the margin of the cavity, as is best to do in preparing for a good filling, have the margin as near a right angle as may be, that there be no acute angle to the edge of the filling when inserted. Brittleness being one of the weaknesses of the material, every possible precaution should be taken to prevent thin edges. Amalgam fillings being liable to displacement before setting, through carelessness of patient, also after setting in mastication if not well secured, precaution should be given. If the cavity is deep, fill the cavity with as stiff a paste of oxychloride of zinc as you can mix and not have it crumble, inserting it quickly and press to the walls with a pad made of small pellet of cotton held with a pair of pliers, trimming away the cement that the cavity be deep enough only to expose the grooves made for holding the amalgam. The alloy should be amalgamated with as little mercury as possible.

Because your filling is an amalgam, do not fail to do your best work. See that your alloy is well amalgamated, avoid slovenly inserting it, leaving masses of the material at the cervical margin projecting to irritate the soft tissue, or neglecting to polish the filling when it is hard. Such neglect is as bad practice as it would be to leave a gold filling unfinished. But you say it takes time, and is a bother to have a patient come back for that. Yes, it takes a few minutes of time and is a little inconvenient, but if you are honest in your endeavor to serve, you can afford both.—*Ohio Journal*.

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Recent discoveries made by the use of the spectroscope show that all the heavenly bodies appear to be composed of the same chemical elements.

## Congressman Lawler's Spelling Reform Bill.

From *Chicago Tribune*.

CONGRESSMAN LAWLER has displayed during his service in Congress a multifariousness which was not expected of him by those who had known him only as a member of the Council. He has not only been an efficient hustler for Chicago, working like a Trojan to get it the World's Fair, and its share of the money appropriated for public buildings and other purposes, but he has sought to curb the flood of oratory in the House by trying to have the rules amended, so that no man would be allowed to speak more than five minutes if there was any one else who had not spoken, but wished to do so.

He has also offered a resolution on the subject of the reform of the spelling of the English language, which will come up for consideration soon before the Committee on Printing. It provides that the Public Printer, when setting up the *Record* and other Government publications he handles, shall drop "ue" at the end of words like "demagogue," "dialogue," "catalogue;" shall omit the final "e" where the preceding vowel is short in words like "definite," "favorite," "infinite," "granite;" the final "te" in words like "cigarette," "coquette," "quartette;" the final "me" in words like "programme," "gramme;" substitute "f" for "ph" in words like "phantom," "telegraph;" and substitute "e" for the diphthongs "æ" and "œ" when they have the sound of that letter.

There is no good reason why the committee (comite) should not report favorably on the resolution, and the House and Senate adopt it. What Mr. Lawler recommends accords with common sense. But after all it would be but a mere drop in the bucket. Or it would be removing but a few of the thorns from the thorn hedge of English orthography. If Congress really wants to do something to modify the abominable, disgraceful system of English spelling, and if it thinks an example set by the *Congressional Record* would have any influence toward reforming it, it ought to tell the Public Printer to drop all silent letters where they are not imperatively needed to indicate the pronunciation. If it does that, it will have done a great work for popular education. But this should be only a stepping stone to pur fonetefy. We must have an alfabet that will contain all the forty sounds of our language.

Nor need it be deterred from doing so by the cry that it will interfere with philologists; will hide the history of a word, and will increase the labors of the scholar who wants to know whence a given word came into this language. It so happens that those words which have been borrowed from the Latin and Greek are the ones which diverge the least from a phonetic spelling and perplex the least the student of the spelling-book. The words which are the most horribly distorted and swarm with the most silent letters are those which come from the defunct Anglo-Saxon vernacular, and they constitute three-quarters or more of the vocabulary of the ordinary man. Those who have learned Latin and Greek are enabled to tell the meaning of many English words by their derivation. They do not have to look in an English dictionary to tell what pneumonia means. But there are few students of Anglo-Saxon. The meanings of the words in English which are derived from that dead Teutonic nation must be learned by the ear or from the dictionary. No harm is done, therefore, if the spelling of a word like "through," or "though," or "enough," or "plough" is altered to conform to the modern pronunciation, for the retention of the old form helps no one to the understanding of the meaning.

The spelling of modern German, which has the same ancestor as the Anglo-Saxon, is reasonably phonetic, and there is no good reason why the Anglo-Saxon portion of the English cannot be revised and amended until the written and spoken words come as near together as the German. Whoever succeeds in doing that, whether it be Mr. Lawler or some one as yet unknown to fame, will earn the blessings of hundreds of millions of the school children of the future whose spoken language is English.

## Judgment as an Element in Dental Practice.

E. C. CHANDLER, STEUBENVILLE, OHIO.

IF I were asked what is the most essential element, and what most conducive to success in the practice of dentistry, I should unhesitatingly answer—judgment. And by judgment, as applied to dental practice, I mean that faculty which enables us to pursue that course in practice, and to select those means and methods most suitable to our own individual surroundings. But the faculty of judgment is something *more* than a mere intuition. I believe it to be innate to the mind, tho it seems to be so wholly lacking in some minds, as to render its existence there doubtful; but if the germ exists, it is capable of infinite development. The highest type comes as the result of experience, observation, thought, and discrimination; and I know of no other calling in life that offers so *broad* a field for the exercise of this faculty.

For, from the time we enter the office as student, through all the years of the longest professional life, there is not a day in all those busy years that we may not *profitably* consult this oracle of judgment.

It receives the patient courteously at the office door, disarms him of unnecessary fear and dread, and is graciously considerate of his comfort throughout every operation. It is gentle and sympathetic with the timid and the sensitive; assumes the aspect of dignity and firmness with the presumptuous; and sits down with *ponderous weight* on the cheeky and chronic grumbler. It selects the most suitable materials, indicates the best methods, and stands as clinical instructor at every operation. It ignores all prescribed rules and usages, and suggests only those means and methods adapted to individual wants.

The first *important* subject upon which judgment must pass, after the student enters the profession, is in regard to location; for up to this point he has been governed largely by the judgment of another.

But, as judgment is progressive, and as experience is one of the essential elements of mature judgment, it is not strange that errors often occur at this point. It is unfortunate that, at the most critical period of professional life, this faculty is most immature, and unreliable, and that fortuitous circumstances often have more to do with laying the foundation for professional life than judgment has. So it happens, that many a man who might have made a success of life, under more favorable circumstances, has become mentally dwarfed, and starved, by the very *poverty* of his surroundings. Soil, air, sun and water are not the only requisites to vigorous vegetable growth. The hot-plant has all of these; but that it may reach its most perfect development, it must be transferred from its root-bound condition to the open air and native soil, where every root and branch may reach out and appropriate to itself the nourishment that is all about it. The same is true in the domain of thought; and so I assert, that for any man to reach the highest altitude of attainment *possible* to him, he must be able to appropriate to that end a generous measure of time and means. Yea, more, he must have communion and fellowship with kindred minds. He must *give* as well as *receive*. He must establish a commerce for his thoughts.

“Good sense will stagnate. Thoughts shut up want air,  
And spoil, like bales, unopened to the sun.  
Thoughts, too, delivered, is the more possessed;  
Teaching we learn, and giving we retain.  
’Tis thoughts exchange, which, like the alternate  
Push of waves conflicting, breaks the learned scum,  
And defecates the student’s standing pool.”

We cannot place too much emphasis on the importance of a proper location; but, failing in that, as immature judgment often does, a change should be made, if made at all, as soon as possible. Because, reputation constitutes a large part of a professional man’s capital stock, and cannot readily be transferred from one place to another. And a man can neither be happy, nor in the highest degree successful, so

long as he is dissatisfied with his surroundings. But, domestic ties, social relations, and business interests, often render a change of location inexpedient, if not impossible. What *then* is the wise thing to do? I answer, accept the inevitable and make the most of it.

But I would not have you understand me to believe that we should be content to remain in the position which the mere force of *circumstances* has placed us; that we should extinguish the taper of intelligent thought, quench the zeal with which every ambitious man starts on the journey of life, and burying our talents sink into oblivion! Rather we should be the more active and zealous. The darker our surroundings, the more we need the light of intelligent thought.

But we ought not to carry our torch so high that it sheds a dim and uncertain light on our own pathway; and, as leaders of professional thought, in our own communities, we ought not to advance beyond the vision of those whom we expect to follow us. We all deplore the ignorance that so generally prevails respecting our profession; but, if we wish to educate the public up to a more intelligent conception of what dentistry *is*, and of what it is *doing* for them to-day, we must adapt the lesson to the *class* we are to teach. I apprehend that the most successful teacher is he who, recognizing the mental capacity of his scholars, places the lesson just high enough to be fully within reach of their intellectual grasp. We have not *all* the inclination, nor the ability, if we had, of becoming intellectual and scientific aeronauts. We have more practical and pressing duties to perform. The conviction has been steadily growing on me for years, that our dental literature is not broad enough in its application. That is, those who write fail to appreciate the wants and necessities of a large portion of the profession. There is too much of the theoretical, and not enough of the practical. This, I think, arises from the fact that most contributors to our dental literature live in the large cities; they aspire to such a practice and position that will attract only the affluent and the cultured; and, as there is no limitation on either line, or fee, they are enabled not only to do better *work*, but to appropriate a large share of their time to study and research. And, as thought always seeks a higher plane than that already occupied, so they seek the higher realms of thought and investigation. And, as thought develops, and practice makes perfect, they acquire the habit of easy and fluent expression, and seek the journals as a medium of their thoughts.

The practitioner situated in the towns, and smaller cities, cannot select his patrons for obvious reasons, but must accept all who come to him, and so *his* practice is subject to a thousand modifying circumstances and limitations. He must accept smaller fees, work more hours, and so deny himself those *indispensable* prerequisites to mental progress—thought, research, and experiment.

The cares of practice so engross him that he has neither the time, opportunity, nor mental activity to pursue such investigation. But it does not necessarily follow that all such men are failures. Success is not always heralded by the blare of trumpets. It is not even indispensable to a *measure* of success that a man's name should be found on the title page of a book, or in a dental journal; and the fact that a name *is* found there is not an *absolute* sign of greatness. There are men in our profession whose achievements in the practice of dentistry are worthy of emulation, whose names have never appeared in any dental journal, and who are unknown to the profession at large. There are practical operations being performed every day by these same men that would prove instructive, as well as *creditable*, clinics before our best dental colleges. I have in my mind, now, one, who more than sixteen years ago, was setting removable bridges and fixt crowns, which, for nicety of adaptation, utility, and artistic execution, I have never since seen surpassed, whose gold plate work I have never seen *equaled*, and whose fillings I have *seldom* seen excelled.

With a breadth, and grasp of intellect, such as few possess, he kept himself abreast the times, not only in the profession, but on all subjects of general interest.

Added to this he possessed a remarkable command of language, and *might* have made a brilliant writer, yet he has never, to *my* knowledge, written an article. *Why*, I am unable to say, but I do know that his talent has not been wasted. He has lifted the professional standard higher, and has made an impress on his own and surrounding communities, that will be felt long after he is gone.

But I would not disparage the honorable position of those who have attained distinction in our profession, whose names are inseparably associated with dental progress, and who have made for us a name and a place among the learned professions—nay, I am *proud* of them, and *honor* them; but I assert that if we should all aim at the same position they occupy, and should reach it, it would be the most disastrous thing that could befall both the profession and the public. So while I would honor them I would also *exalt* those *earnest, conscientious, hard-working men*, who, tho quietly, have *earnestly* and *effectively* labored to promote the interests and uphold the dignity of the profession. The results of their work have been less conspicuous, simply because their practice and surroundings have been essentially different. And this brings me to the thought that has been uppermost in my mind while writing this paper, namely: that different localities demand different methods of practice. No universal system of practice can be adopted that will be equally adapted to all localities and classes. This is caused partly by the diversity of intelligence respecting our profession that obtains in different localities, but more largely to pecuniary restrictions.

Many people who are intelligent, and desire the best work, cannot afford it. To illustrate: A piece of bridge-work, a crown, or a regulating appliance is plainly indicated; there is no question about what is best to do, but the work is difficult and complicated; it requires time, and a high order of skill, and *these* involve a greater expense than the patient can afford. In this and like communities there are hundreds of such cases, and the dentist so located must not only decide what is best to do, but that more *difficult* question, what is best to do under the *circumstances*. How can he render the best possible services to his patrons without too great sacrifice to his own interests? These are the questions that he must appeal to judgment every day—to disregard them is inevitable failure.

I think I may reasonably assume that it requires as high an order of judgment to successfully conduct a practice in the smaller, as in the larger cities, where they are exempt from such limitations. Let the most eminent man in the profession locate in such a place, pursue the same course in practice he has been accustomed to, and charge the same fees, and he will have more time for recreation than even the most generous laws of hygiene demand; he could not possibly sustain himself.

It has been said that we ought to render our very best services in every operation regardless of the fee we are to receive. I denounce that as unjust and unreasonable. From what code of morals comes such teaching? I believe we ought to render *value* for every dollar we receive, but how far are we to give our time and services, unrequited, to the public? Let us remember there are *others* whose claims on us supersede those of the public. "Charity begins at home."

Pardon the illusion—I use it simply to point a moral—but witness the spectacle, a few years since, of two leading men and *educators* in our profession, dying in the prime of life, and at the very *zenith* of professional attainment, and leaving their families in destitution! Gentlemen, I confess to you that that *lessened* the respect and admiration with which I had regarded those men.

An ambition for name and fame, tho laudable enough, will not atone for the culpable neglect of the more important and binding duties we owe to our own.

Yet, we should not sink to the other extreme of supreme selfishness, but choose the "golden mean." We cannot better do this than by taking a careful and intelligent survey of our surroundings, clasp hands with those about us, and go forward, and upward!

It is not wise to ape those who stand as authorities in our profession, nor to



adopt into our own practice everything we read about in the journals—not even if we believe it to be a good thing in itself. Dental books and journals are very useful helps to every dentist. They are professional granaries—great bins of thoughts and experiences. But they contain mixt grains and a vast amount of chaff.

To get *seed-thoughts* we must winnow them through the screen of judgment, and then select the seeds with reference to the soil, and the crop we wish to produce; we must have an eye to the eternal fitness of things. Submit all the perplexing questions that may arise in our way to an intelligent judgment and let its decisions be final.—*Ohio Journal*.

### Laboratory Hints.

DR. WILLIAM H. STEELE, FOREST CITY, IOWA.

**F**OR your Oil Stone, use one part glycerine and two parts alcohol. It keeps the surface clean, and sharp gritted; oil thickens by use and exposure, and gums the stone.

**Smooth Plates.**—A nice way of preparing plates to come from the flask clean and smooth, and ready for pumice and final polishing, is to be sure and get a perfect, smooth cast. Make your model plate of paraffine and wax. After the teeth are mounted correctly, shape the gums and plate just as you would have it for the mouth; then, after trying it in the mouth to make sure it is all right, place it back on the model and flask as usual. When the flask is opened, place both parts in boiling water, and with an atomizer tube go over all the joints and pins, thoroughly washing out all the wax. Take the flasks out of the boiling water, and immediately coat both the model and the lingual surface of the plate with a varnish made from pure liquid sillex, to which has been added enough fine pure powdered tin, to make it give a good metallic coating. Then set the flasks in the air a few minutes till the varnish is set. Now lightly coat both varnished surfaces with soap to prevent the metal coating from adhering to the vulcanized plate. On opening your flask the plate will come out clean and smooth, requiring but little work to finish.

**Finishing Around Plain Teeth.**—When plain teeth are used, and pink rubber for gums, a nice way to finish around and between the teeth is to use a No. 2. wood polishing point in the engine. Hold the plate in the left hand, and with the right, handle the point, working it around and between the teeth, dipping in pumice and water as necessary. I find my engine as useful in my laboratory as at the chair.

**Sharpening Files.**—Often good files are thrown aside when they could be made useful, by subjecting them to the following treatment. Clean them of all dirt by washing in warm potash water, then wash them in clean warm soft water, hold over a fire till dry, and be careful not to get them hot enough to injure the temper. Make a bath in a wooden vessel, as follows: Put the files in one pint of warm rain water, add  $1\frac{1}{2}$  ozs. of pulverized blue vitrol, 2 ozs. of borax, pulverized and well mixed; turn the files over so that all parts may come in contact with the mixture. Then add to the bath 7 ozs. sulphuric acid and  $\frac{1}{2}$  oz. good cider vinegar. Allow the files to remain in the bath a few minutes, when remove, dry well with blotting paper, wipe *thoroughly* with olive oil, wrap in porous paper and lay away till needed.

**Care of the Hands.**—I find the following a very nice way to treat the hands while working in the laboratory: Before opening the vulcanizer, or going to work in plaster, wash the hands well in soft water and *good* soap; while still moist pour on and rub in olive oil. After getting through work at the bench, wash again in soft water and soap. This way the stain does not penetrate the skin, but the olive oil, stains and plaster all come off together, leaving the hands clean and soft.

**Model for Cast Metal Plates.**—For making cast metal plates of tin, Watt's metal, etc., instead of using pumice and plaster for the model, pour the impression, with Teague's Impression Compound. It makes a good smooth plate, and without any danger of breaking when separating from the impressions, and doing away with the danger of washing when pouring. The case may be flaked with pumice and plaster as usual.

## The Hypodermic Use of Muriate of Cocaine in Oral and Dental Surgery.

(Results of more than two hundred injections.)

ARTHUR C. HUGENSCHMIDT, PARIS, FRANCE.

(In American Dental Association, of 1888.)

MY attention was first attracted to the hypodermic use of cocaine in our specialty while listening to the excellent lectures delivered by Prof. Horatio C. Wood, at the University of Pennsylvania, in the early part of 1885, when he recommended the method to produce local anesthesia in minor surgical operations, as the opening of abscesses, felons, etc. Some months later, having a portion of necrosed bone to remove from the outer alveolar portion of the superior maxilla, I injected cocaine, and the operation was performed painlessly. I then tried the method for the extraction of teeth or roots, but at first had unsatisfactory results, due, I think, to the bad quality of the drug used. I now use this method nearly if not every day, and sometimes several times a day; but since passing my one hundred and fiftieth operation, I have ceased to keep a record, having satisfactory results in all cases. A number of my injections have been made under the direction of my excellent preceptor, Dr. Thomas W. Evans, who has also used this method, and whose severe, yet just, criticisms have prevented me from using the agent more extensively.

In this connection, the following interesting fact may be mentioned. As Sir Morell Mackenzie, in an official report of the history of the illness of the Crown Prince of Germany, has spoken of Dr. Thomas W. Evans' connection with the case, it is not a breach of professional confidence to state here that Dr. Evans, who has been attending the Crown Prince of Germany, for many years, on one of his visits to the imperial patient last September, at Toblach, extracted a very badly diseased left lower second molar, scraped the socket of the extracted tooth, and made an exploration of the surrounding parts, which communicated with the socket by fistulous tracts, all in an absolutely painless manner, a previous injection of one-half grain of cocaine having been made. I may further say that Dr. Evans has always thought and still considers this very seriously affected tooth to have been one of the primary causes of the Emperor Frederick's disease.

Since I have been using cocaine, I have had it in all but one local and three general accidents, tho five persons felt slightly unpleasant effects of the drug. These accidents we shall study further on.

In oral surgical operations I have used cocaine on several occasions with complete success, the following being examples:

A young lady, aged twenty-two, suffered from a very severe and painful nervous affection, the origin of which was ascribed to a non-erupted right upper third molar. The gum showed no signs of its presence; still it was decided to make an exploration of the parts in that region, to see if we could ascertain the whereabouts of the tooth deeper down. Half a grain of cocaine in solution was injected, half of it outside the alveolar border, the other half in the interior or palatal region. Seven minutes later I made the first incision; the bone was exposed and sounded in two or three places, but no tooth could be discovered. The operation lasted ten minutes, and was painless.

In another case, where I had to move an epulis the size of a hazel-nut, cocaine was injected into the surrounding parts, the little tumor was then removed, and the point of attachment cauterized with the red-hot iron, all painlessly. I have used it in cases of re-implantation of teeth, making the operation painless. On several occasions I have tried these injections in acute periosteal inflammations due to dead teeth, extension from an acute pulpitis or from external causes, but have had very unsatisfactory results. In fact, I had given up the further use of this remedy in this condition, resorting to the usual treatment, when I tried the combined use of antipyrine and cocaine, which gave me excellent results; and now, whenever I have to

deal with a periosteal inflammation which will not yield rapidly to our usual remedies, I first inject seven minims of a five per cent. solution of cocaine muriate in the painful region, to anesthetize the part, for the antipyrine injection is a very painful one. Five minutes after the cocaine is injected, I introduce, always hypodermically, fifteen grains of antipyrine dissolved in fifteen minims of water; the pain will usually disappear within three-quarters of an hour. One hour after the injection I give fifteen grains of antipyrine internally. The only trouble from this injection is an induration and slight swelling of the injected part, which will last for a few days, but is painless in itself. The cocaine muriate is the salt used. I always prepare the hypodermic solution myself, making it nearly every day, which enables me to have a fresh solution, which is important. To do this conveniently, I prepare at one time several small packages, each containing one grain of the salt; when I want to make the solution, with the hypodermic syringe I measure twenty minims of distilled water in a little glass, and dissolve one of the one-grain packages in it. Half the quantity, or ten minims, equal to one-half grain of the salt, is the quantity required for an adult. Many practitioners still inject a whole grain of cocaine. This course is not to be approved, for half the quantity properly used will give exactly the same anesthetic results, and the risk of general accidents is much less.

In June, 1886, I gave at the same sitting, in half an hour's time, to a young man who desired to have eight roots of teeth taken out, one grain and a half of cocaine salt, without any unpleasant effects. I would not advise such a quantity, nor would I again give it, for during the past year there have been several serious cases of accidents reported before the French Medical Society, when one grain of the drug only had been used.

The following is the *modus operandi*: Previous to inserting the hypodermic needle, strict antiseptic precautions must be taken, to prevent local accidents. I oblige every one of my patients to rinse his mouth with a solution of permanganate of potash, then I pass over the part to be punctured a piece of cotton dipt in a bichloride solution (1 to 1000). Then I take into the hypodermic syringe ten minims of the solution, containing a half-grain of cocaine, insert the needle on the outside of the gum, midway between the neck of the tooth and approximately the apex of the same. The needle is held very obliquely, to prevent it as much as possible from sliding on the bone, and is pushed *upward* for a short distance, in the upper jaw, and downward in the lower jaw, to the depth of half an inch. Then introduce five minims of the solution very slowly. The liquid ought to pass out in a comparatively easy manner, if the needle is well inserted. The other five minims are injected in the palatal region again midway between neck and apex of root, using the same precautions as regards sliding on bone. These two injections are to be made, one immediately after the other. If you desire to extract two or three roots which are close together, surround these roots by four injections of two or two and a half minims of solution each.

The local anesthetic action of the drug is almost immediate, but it becomes much more complete in five to ten minutes. While injecting, especially if the needle is introduced in resistant tissues, one can observe in a variable zone, having for its center the point of injection, a bleaching of the gum, which becomes very white and hard; this appearance, however, is only temporary, and at the time of operating will have entirely passed away.

Generally, the only pain produced is that caused by the introduction of the needle; in one case only was a very severe pain felt, which lasted more than two hours. It is true, this patient was suffering from an acute periosteal inflammation.

The local action of the drug is probably twofold; its immediate effect being an anemia of the injected part, probably due to a stimulating action on the vaso-constrictor of the peripheral vessels. The local anesthetic effect is due, as stated by Laffont and Arloing, to an inhibitory action on the peripheral sensitive nerves. In fact, Laffont calls cocaine "sensitive curare," and, according to him, it acts on the

termination of the sensitive nerves as curare does on the peripheral motor plates. Brown-Séquard has drawn attention to the fact that sensibility to pain alone disappears, while tactile sensation remains, with all agents which act on the peripheral nervous system. This is the case with cocaine, and I have noticed, whenever I have given the drug in injection, that afterward, the patient will report himself to have felt nearly every step of the operation, but without pain. Cocaine is, then, a local anesthetic to pain only, and not to tactile impressions—a true local anesthetic.

Brown-Séquard has also demonstrated the fact lately, that when cocaine is injected directly into a vein, a general anesthesia, similar to that following the administration of chloroform or ether, will be produced—an insensibility to painful and tactile impressions.

The local accidents produced by cocaine have been sloughing of the soft parts surrounding the point of injection, followed in some cases by a local necrosis of the denuded portion of the bone. The only local accident I have had was a slough and necrosis of a piece of alveolus about the size of a pea, opposite an upper third molar. This accident I attribute entirely to carelessness on my part. The tooth was very badly situated, and in addition the muscles of the cheek were very strong and powerful. I forgot all about antiseptic precautions, whereas we know the back part of the mouth is especially exposed to the action of septic agents. Moreover, I had great trouble in introducing the hypodermic needle, in fact broke two, and when at last I succeeded in introducing it I thought I would inject anyhow, tho I had to use great force to drive the liquid out, which indicated that the needle was in contact with bone. Two days afterward a small slough appeared, and six weeks later a small piece of bone came away.

The sloughing of the soft parts, which has been reported, I attribute in great part to lack of antiseptic precautions; but as regards the necrosis of the bone, it is certainly due, in the great majority of cases, to injecting the liquid when the needle is too near, or even directly in contact with the bone; the force of the injection producing a local periosteal detachment, and a necrosis of the part of the bone thus exposed. To avoid this, whenever I feel the needle has struck bone, I withdraw the syringe somewhat before I make the injection.

Let us now examine the effects of cocaine on the general system.

When one-half grain of cocaine muriate is injected, in most cases, there will be no unpleasant symptoms, and if the person is in a normal state, not fearing the operation, no physiological action of the drug will be noticeable. If, however, one has to deal with a frightened person, he must be extremely careful, and I should even advise never to inject cocaine into a person who shows the least fear. Postpone your operation, and try to convince the patient that the injection can be made without danger. If you do inject when the patient is frightened, you will certainly produce a *partial* unconsciousness, which is one of the particular effects of cocaine. This partial unconsciousness has supervened in all persons who were frightened when I operated on them. The explanation for such relation between fear and the apparently increased physiological action of the drug on such persons, we shall consider after having examined the physiological effects of cocaine.

I have observed the following in three patients who presented general symptoms. Two occurred in my early practice, when I used one grain of cocaine salt, the last one with the exhibition of one-third grain in a very anemic patient.

About one minute after the injection the patient complains of a strange feeling in the head, then becomes pale, and with the increase of the pallor he complains of cold all over (my first case had formication in the extremities). The pulse rises to 110-130, respiration slows, and becomes embarrassed, even gasping. Never have I seen a complete unconsciousness, as is proved by the fact that I make it a rule to talk continuously to my patients when they get in that faint condition, to prevent them from getting drowsy; a point which I think ought not to be overlooked. This only partial unconsciousness produces in the patient the awful sensation of fear of

approaching death. In a case which was reported lately by Dr. Dejerine, the patient had taken fifteen grains of cocaine hypodermically at one time, and remained apparently unconscious for half an hour, but he afterward assured the physician that he felt him when he pinched his hands. Consciousness is, therefore, not entirely lost to the patient, tho it seems so to those about him.

The pallor of the face and the sensation of extreme coldness in the extremities indicate certainly a general vaso-motor disturbance. Cocaine seems also to influence very materially the circulation as well as the respiration, which is probably due to a great disturbance of the cerebral circulation at the base of the brain, resulting in cerebral anemia. Laffont has indicated that it had a very exciting action on the vaso-constrictor filaments of the great sympathetic nervous system.

Let us now examine the condition of a frightened person. One of the first apparent symptoms is pallor of the face, which certainly indicates a vaso-motor disturbance of this region, of its peripheral circulation. If the fright is kept up long enough, the patient will also feel cold, and soon a sensation of fainting will present itself, which may go on to *absolute* unconsciousness. Here, again, we have a great disturbance of the cerebral circulation, constriction of the vessels producing anemia of the brain, as shown by the symptoms.

Now, if to such a patient, already frightened, whose peripheral and cerebral circulation is already interfered with, you administer an agent, cocaine, which produces the same train of symptoms, you will certainly have an apparently increased physiological action of the drug, and you must be prepared to meet with the usual accidents—partial unconsciousness, very rapid pulse, slowed and labored respiration, cold extremities, etc.

The influence on the patient of a previous knowledge of the accidents which may be produced by cocaine is really remarkable. The following case will prove to be interesting in this relation. A lady desiring to have a tooth extracted with cocaine, I was called to make the injection. This patient had been told beforehand by her physician, what unpleasant symptoms presented themselves in certain cases of cocaine injections. The description given was an inaccurate one. The patient being very frightened, I insisted on postponing the operation, but not succeeding in doing so, I announced that I was going to inject the salt, and then introduced in the gums ten minims of *distilled water*. In less than half a minute she complained of a terrible sensation in her head, and soon cried out, "I am dying." She *fainted*, but was not in that semi-unconscious state which characterizes cocaine disturbances. Her physician had forgotten to describe to her this particular cocaine faint feeling. This was a case of self-hypnotization, no doubt.

The only case of accident, in my experience, which cannot be attributed to fear, occurred a few days ago. The patient was a young married lady, aged twenty-three, apparently in perfect health, very courageous, on whom a slight cutting operation in the back part of the mouth was necessary. I injected only one-third of a grain, the operation being a superficial one. In less than one minute she complained of a strange feeling in her head, when she was immediately placed on her back. The pulse ran up to 120, and the respiration slowed, but, as usual, there was no loss of consciousness. I gave her five drops of nitrite of amyl to inhale, which made her feel better. Then I gave her a hot brandy punch to which were added forty drops of sulphuric ether. This restored her rapidly. She then told me that she was extremely anemic, which neither her face nor lips indicated. She had traveled for nearly six months in India, where she contracted fever, and in addition, five months previous to my seeing her, she had had a miscarriage, which obliged her to remain for three months in bed.

Anemia is, then, a contraindication to the use of cocaine.

I have used this drug with great caution, not giving more than one-third of a grain in obese persons, in whom the state of the circulation is always doubtful. The same precautions should be taken in the case of old people, in whom there is a tendency to an atheromatous condition of the blood-vessels.

Hysterical patients are also to be carefully managed, or you are liable to bring on an hysterical attack. The following case will exemplify. For a woman, aged thirty, who presented unmistakable signs of hysteria, and especially the well-known "globus-hystericus" and cerebral nail, "clavus hystericus," among them, I injected, in my earlier use of the drug, one grain of cocaine. The first symptoms produced were an increase of the cerebral nail feeling, or sensation of strong pressure applied to the top of the head; next, a feeling of extreme pain in the gastric region was manifested, and finally she fell in the characteristic semi-unconscious state. She was placed in a recumbent position for three-quarters of an hour and kept quiet, nothing being given her, after which she felt perfectly well.

In cardiac and pulmonary diseases I am always specially careful, never giving more than one-third of a grain.

The third case of general accident I have had is the following: Patient, a young man, aged twenty-five, with a facial clonic convulsive tic, which it was thought was due to a solitary tooth, which was regarded as the point of origin of the reflex. I injected three-fourths of a grain of cocaine. In about a minute and a half the ordinary symptoms presented (pallor of face, semi-unconsciousness, very rapid pulse, irregular respiration). The object of the injection was to suppress the point of origin of the reflex, and in that manner do away with the spasm temporarily. The clonic spasms persisted, however, while the parts were under the anesthetic influence of the agent, and I concluded that the suspected tooth had nothing to do with the case. This tooth was sacrificed later. On examination its roots were found to be exostosed, but the tic remained.

In persons suffering from advanced constitutional diseases, such as the last stages of tuberculosis, diabetes, or the cachexie of different diseases, I have always refused to administer the drug. A fact worth mentioning is the apparent innocuity of cocaine in plethoric subjects, in whom the cerebral circulation is active. Having had the opportunity of making a few injections on several such persons, two of them being indeed very much frightened, I must say that not one, at any time, experienced one of the cocaine symptoms, and all reported that they felt perfectly well and comfortable. As cocaine seems to have such a decided action in rapidly lessening the cerebral circulation, would it not be advisable to try the hypodermic use of this remedy in cerebral hemorrhage, or apoplexy, or in sun-stroke?

The combination of carbolic acid and cocaine, which has been recommended for some time, I have never used, being perfectly satisfied with the results from the pure drug. Moreover, I did not see the advantage of bringing together these two drugs, whose local anesthetic effect is produced in entirely different methods. We know that cocaine acts on the peripheral sensitive nerves in such a way as to render the part insensible to pain, but not to sensation, allowing patients to follow every step of the operation. Therefore it does not destroy the sensitive nerve extremities. Carbolic acid, on the other hand, is a coagulant local anesthetic, producing insensibility by coagulation of the albuminous constituents of the histological elements of the parts with which it comes in contact, and therefore destroying definitely their physiological functions.

As to the treatment of the unpleasant symptoms, as soon as a patient feels faint I place him immediately in the recumbent position, and I keep on talking to him to prevent drowsiness. Smelling-salts may also be used. If the patient remains pale, with pulse rapid and embarrassed respiration, place five drops of nitrite of amyl on a handkerchief and direct him to inhale it till he feels better. Ten minutes later another five drops may be ordered if necessary.

In the case of the accident with the anemic patient, I gave in a brandy punch forty drops of ether, with an almost immediate result.

Finally, in case of severe poisoning, if several grains of cocaine have been taken, two or three hypodermic injections of thirty drops of ether can be given, which will act favorably on the disturbed circulation.

## ADDENDUM.

Up to this date (July, 1888), the number of my hypodermic injections has passed four hundred cases. Since the foregoing article was written, I have had but one case presenting slight general symptoms, which lasted only a few minutes, nitrite of amyl inhalations being used with excellent results.

I find that I omitted mentioning in my article the following fact, which is important, if one desires to extract roots of teeth painlessly. When the parts surrounding the root to be extracted have been anesthetized by a cocaine injection, the forceps beaks are to be gently pushed into position, and the extracting movements made very slowly, without trying to extract a root by one single twitch or pressure. The rapid method of extracting must be avoided, and this is easily done, as the patient will feel no pain if the parts are not roughly handled.

I have used these injections in six cases of implantation of teeth (Younger's operation). In five cases I have only given one-half grain of muriate of cocaine in ten minims of water, five minims of this solution being injected outside, and five minims inside of the masticating line. This quantity was quite enough to enable me to make the operation painlessly. In one case I had to give an additional injection, as sensibility returned very rapidly.

When excavating in excessively sensitive teeth, I occasionally have recourse to the hypodermic injection of one-third grain of the drug, as near as possible to the end of the root, with good results.

### Position of Dentistry in Italy.

C. H. DUNN, L. D. S.

FOR the last ten or twelve years there have been efforts made for the progress of the dental profession in Italy by some Italian dentists. There have been two societies formed among them, and about twelve years ago the Italian Odontological Society, numbering about one hundred members.

The society met in congress once a year for five or six years, when it sunk into an apathetic condition for some years. It was very nearly dissolved in the fall of 1888, but by vigorous efforts was rescued from impending dissolution, and met in November, 1889, in the city of Genoa, with a fair attendance of members from the different cities of northern and central Italy.

The other society, formed at about the same time, is the Florentine Dentists' Society. This, beginning with five or six members, has prospered in every way; it now has fifteen resident members and several honorary associates. It holds its meetings monthly, and discusses scientific and other subjects interesting to the profession.

It has for several years had a dispensary for operative dentistry, open every morning for two hours, which has proved a useful school for young students.

It also publishes monthly its transactions in a journal.

These two societies are trying to induce the Ministry to modify the projected law so that students shall have a special course of two, or three, or four years. Whereas, the new regulation applying to dentistry in the sanitary law, which will shortly be brought before Parliament, proposes that all dental students shall first qualify as medical men. Thus making it necessary to study medicine six years, and then—but the law does not say what then he is to do, and I cannot pretend to clear up the difficulty.

The two societies are moving in the matter, while that of Florence is compact and united, expressing what they desire; the Odontological is divided in opinion.

The profession in Italy, therefore, is in an unsettled and an uncertain state. There is a great desire to do good on the part of the Minister of Public Instruction, but his advisers are not practical.

The king has plenty to occupy his attention, and will leave the solution of the dental difficulty to others who ought to be more interested in it.—*British Journal*.

## The Bacterium and its Pathological Significance.

G. H. M'CAUSEY, JANESVILLE, WIS.

IN its results modern surgery has made great advances. Death from the operation of ovariectomy *has been* the rule, *now* it is the exception. Compound fractures have been accompanied by traumatic fever, suppuration, septicemia, death. The obstetrician has been followed by puerperal fever, case after case. In public hospitals have flourished septicemia, pyemia, gangrene.

Epidemic and endemic diseases have left their record. Asiatic cholera, yellow fever, typhus, typhoid and malarial fevers appear periodically or endemically. Diphtheria, variola, measles, scarlet fever and various lesser contagious diseases follow each other in succession.

Contagion has been long known and conveyed the idea of a specific cause.

During all the years of study of the subject of infectious diseases, investigators have, in a microscopical examination of the tissues, fluids, and dejecta of patients dying of these diseases, found invariably present small organisms of different shapes and sizes, the nature and significance of which were imperfectly understood.

They are now known under the generic term, Bacterium, and have been classified as sphero-bacteria, micro-bacteria, and spiro-bacteria, and each class in its turn has been subdivided.

To-day they are commonly classed according to their forms, as micrococcus, bacillus, and spirillum. The micrococci are small bodies of a spherical, or, may be, of an elliptical form, and are of different sizes, like other forms. The bacilli are short rods of different lengths. The spirilla are of the form of a corkscrew.

That the bacterium belongs to the order of fungi, is based on the fact that they are devoid of that coloring matter of plants which is termed chlorophyl. They differ, however, from other fungi in being unicellular. On the other hand, they, like other cryptogamous plants, at times reproduce themselves by spores, yet at other periods in their life-histories they multiply by subdivision, like the unicellular protozoa.

The speculation of the past determined nothing till inoculation with isolated bacteria was performed. Step by step doubts have been removed, and we have learned that they possess an important pathological significance.

The use of pure cultures, obtained by means of Koch's solid medium, a mixture of gelatine, beef extract and blood serum, has made possible the inoculation of the animal body with specific varieties.

It has been definitely settled that, up to this time, a specific bacterium is responsible for either one of nine specific pathological conditions: chicken cholera, pyemia (micrococcus), septicemia (bacillus), gangrene (coccus), erysipelas (bacillus), tuberculosis (bacillus), leprosy (bacillus), relapsing fever (spirillum), and anthrax (bacillus).

Late investigations have also shown that, in other diseases, a specific bacterium is always present in each, yet their specific significance has not been demonstrated.

Inoculation, with some varieties, produces no specific infectious diseases; but is the cause of sufficient irritation to result in high grades of inflammation.

Having proven that some diseases were caused by the presence of specific organisms, the question why was next in order. It was soon noticed that when putrid fluids containing bacteria were injected into the blood of animals, characteristic symptoms followed, and which closely resembled those resulting from the administration of toxic doses of various vegetable alkaloids; and it was found that whenever these fluids of putrescence were sterilized by long continued boiling, or deprived of their bacteria by filtration through clay, they yet retained their poisonous qualities, and produced the same effect on the animal economy as before sterilization, which led to the conclusion that the bacterium itself was not responsible for the symptoms.



Interested chemists, however, succeeded in extracting from these fluids various alkaloid products, which produced the same toxic effects as the fluids themselves, thus proving that not bacteria, but their waste products are the causes of the poisonous symptoms noted.

The surgeon and the dentist, as a specialist, both find use for knowledge of bacteria. Pain in a tooth is often referable to a dead pulp, caused, we are told, by the presence of gases imprisoned in the pulp chamber, but the same condition may exist when the chamber is open. What causes the gases? Decomposition. But why decompose if closed? The pulp chamber is not intact in the sense that a glass cell hermetically sealed is intact. Surrounding the pulp is an envelope with processes which penetrate the minute tubules of the dentine. Decay penetrates the enamel till it reaches the dentine. Bacteria are always present, the walls of the dentine being already tunneled.—*Dental Review*.

### Materials for Plates.

PROF. L. P. HASKELL, CHICAGO.

THE question has been asked me, "*What is the best base for artificial teeth?*" The first point to be considered is, what are the requisite qualities for a material for a base?

1st. A material that will not be affected by the secretions of the mouth.

2d. A material that will not produce injurious effects on the tissues of the mouth, or effect the system in any respect.

3. A material which has the requisite strength to resist the strain to which artificial dentures are often subjected.

4th. A material which can be manipulated with facility.

5th. A material which can be readily repaired, and at a reasonable expense.

I will take the materials commonly used, in the inverted order of value.

First on the list I place *Celluloid*, and which, after five years' use, trying to convince myself that it was a valuable material, I came to the conclusion that it was the worst material ever used for dentures.

My objections are, first, it is a vegetable base, and, consequently, a non-conductor of heat; the result of which is, that the membrane is kept in an inflamed condition, the more so when the plates adhere well to the palate, so that the air cannot circulate under it. The second result of this retention of heat is the disappearance of the process to such an extent as to often leave nothing but a ridge of membrane, flabby and pendulous.

The second objection to it is, that in many mouths it absorbs the secretions, and consequently becomes very offensive. I know it is claimed that where this work is put together by the dry heating process, and with metal surfaces, the results are different; and so they are when first worn, but this effect (which is simply closure of the pores of the material) is soon destroyed by the wearing off of the surface in mastication and cleansing.

The third object is the difficulty of repair, and the worst feature of this is the dark line that is formed around the necks of the teeth.

The fourth object is found in the difficulty of keeping clean. It cannot be done without the use of pumice or other powder, and it wears away the surface; the wearing of the surface in mastication is such that the heads of the pins are commonly exposed, and I have often seen holes in the plates from the same cause.

Next on the list is *Vulcanized Rubber*.

While I do not consider this material an unmixed evil, it has serious objections, as follows: Like celluloid, being a vegetable base, there is the same objection of non-conductibility, causing inflammation of membrane, and also more serious objection of *wasting of process*. This, it should be remembered, is not additional *absorption*, but owing to the presence of undue heat, the waste material is not replaced as elsewhere in the system.

Also, like celluloid, it is difficult to keep clean, but not to the same extent. Otherwise this material serves a good purpose. Thousands would be unable to afford artificial dentures were it not used. In the attachment of the teeth to a gold plate, in full sets or partial lower anterior teeth, I could not dispense with it. For the use of full sets of gum teeth, *soldered* to the plate, is far more objectionable.

Next on the list I would place *Silver*. Not coin silver, but pure silver, alloyed with platina. It makes a good partial upper, when the patient cannot afford gold, tho it is not admissible for full sets, as rubber cannot be vulcanized on it. *Aluminum*, when *cast* by the Carroll process, is undoubtedly a good material, but the swaged plates for general use I do not think are advisable. Often iron is in it, so that holes are eaten through; and it can be repaired when cracked, only by the casting process. The casting process is difficult, and few have made it a success.

The *cast metal* plates (Watt's, Weston's, Reese's) I have used only for lower sets. While these metals are unobjectionable in the mouth, so far as I can discover, and securing nice adaptation, my success with them has not been flattering, and I have used the method for several years. There seems to be a yielding of the process, and necessity for altering of the margins, so long as they are worn, and I have ceased to use them.

*Porcelain* is an unobjectionable material for plates, and the method of making these plates requires a long experience. And it is not possible to secure artistic results in the arrangement of teeth and gums, and securing correct articulation. Tho I have been familiar with the process ever since its introduction by Dr. Loomis in Boston, I have yet to see one that covers all the requirements of an artificial denture.

*Platina* is unobjectionable in the mouth. It can be used for full sets, with rubber attachments, for partial sets and soldered work, as well as for continuous-gum work.

*Gold* for all purposes, except as a base of continuous-gum, is good; for partial sets the best of anything used; for full sets, with rubber attachments, next in value to continuous-gum.

*Continuous-gum* has stood the test for thirty-five years, and is the strongest, most durable, most natural in appearance, and the most cleanly and healthy of anything worn in the mouth.

I must, however, call attention to the latest "fad," "Ward's Electro-Metallic Plates." They are unexcelled in one feature, and that is in producing a perfect fit to the model, and here their merit ends. The metal is deposited by electrolysis, and consequently the plate is *granular* in its structure, and so will never endure the strain to which many dentures, especially partial sets, are submitted, and results in cracking of the plates, and breaking off of teeth and clasps. As the inventor says, they must never be subjected to a red heat; these breaks cannot be soldered. The only way they can be repaired at all is to solder as you would a tin pan!

Not only this, all these plates I have seen had such an infinitesimal amount of gold deposited on the silver, that in polishing the rubber attachments, the silver was exposed and the sulphur in the rubber turned the silver black. This work will not stand the test required of an artificial denture.—*Ohio Journal of Dental Science*.

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### Supernumerary Incisors.

DOROTHEENSTR, LEIPZIG, GERMANY, March 7th, 1890.

DR. T. B. WELCH, EDITOR ITEMS OF INTEREST :

DEAR SIR:—In reply to the question of Dr. J. M. Reed, in the January ITEMS, regarding supernumerary incisors, I have an interesting case. A gentleman, aged forty, has five superior incisors, all well formed and in good position. The extra tooth is a right lateral; his father had also an extra lateral, and the same condition is inherited by his second son.

W. A. SPRING.

## Treating and Filling Roots.

DR. S. G. PERRY,

In Penna. Odontological Society.

FROM microscopic observations of the contents of pulp canals, I find that when first opened, if there is a disagreeable odor, there is always a lively condition microscopically. Such teeth may give trouble on disturbance, from microscopic life. Whether such odors are caused by the rapid multiplication of germs or to chemical action resulting from such multiplication, is hard to say; but it tallies with clinical experience to expect disturbance when such teeth are opened if the most prompt and active antiseptic measures are not resorted to. It does not seem right to attribute the trouble to the contents of the pulp canal alone. We must look further, for, as Dr. Truman says, there is a large proportion of once living substance in the tubuli themselves, and to fill the pulp canal before this has been sterilized is unwise.

As to the removal of the pulps of teeth that have never been inflamed—if they are destroyed at all—I think there can be no doubt, it is well, if there is a healthy condition, to fill the canal as quickly as possible. If it is left open, particles of food, mucus, etc., get in—substances that will produce the very trouble the pulp itself will produce if not removed.

The best method of filling the roots of teeth seems to be an open question. For many years I have been in the habit of using the gutta points. I believe they originated in my office. I use them as much as any other means, because it is possible to carry thin points to the end of the roots, and by the solvent action of chloroform get a perfect fit to the walls of the canal, as well as to be more certain of closing the open mouths of the tubuli. My objection to oxychloride is, that the air becomes confined before the instrument, and it is difficult to get the filling to the end of the root. This will be easily shown by the attempt to fill the roots of teeth out of the mouth, or better still, the closed end of glass tubes drawn down to resemble the shapes and sizes of the pulp canals of teeth. In filling the canals of teeth there must be no open spaces left, as they become receptacles, and, being filled by infiltration, become as great a source of danger as an unremoved pulp.

And yet I consider there is, after all, an objection to gutta-percha. It is somewhat absorbent and not antiseptic. Sometimes, when removed after many years, there will be a disagreeable odor from it. The filling of a pulp canal should be as indestructible and non-porous as possible. I question therefore if it is not true, as claimed by Dr. Jack in the "American System of Dentistry," that the very small part of the pulp canal near the end of the root can be filled more accurately with gold.

I have in the last few years many times filled the tips of the roots with gold in the manner described by Dr. Jack, and always with the feeling that I had made a close tight filling, free from pits and holes. After reaching the large part of the canal I see no advantage in using gold. In other words, when I can be certain of filling with oxychloride without danger of air bubbles, I know of no better substance. I suppose I fill the tips of the canals about as often with gold as with gutta-percha, but the larger parts of the canals I almost always fill with oxychloride. Drying the tooth as much as possible I saturate the root with chloride in the hope of sterilizing the tubuli, and then fill the canal with the oxychloride. These methods are applicable to good, healthful teeth. The roots of teeth that have been diseased I often fill so that the root filling can be removed without much trouble, using tapered gold wire filed to fit the root fairly, and reaching, if possible, to the apex. This I plunge through the oxychloride or the solution of gutta-percha. The large end of the wire I notch or bend over in form of a ring to facilitate removal in case of need. Tho I do not put in fillings expecting they will be removed, yet it is comfortable to know that, if needful, it can be rather easily done.

## Nervous Depression, in Relation to Dental Operations.

DR. JAMES TRUMAN, D.D.S.

(Before the Pennsylvania Odontological Society.)

THE profession of dentistry is certainly one of the most trying. The dentist, from the nature of his occupation, can have no respite during the working hours of the day. This means more than mere labor; it is an unbroken effort of the mental and physical powers of the operator, in almost constant conflict with similar disturbed relations of the patient. The interchange of psychical influences, under such circumstances, is but little understood; but the fact is well-known that one nervous patient will exhaust the operator more in one hour than a day's work over those of a quieter character. Standing, as most do, from eight or nine o'clock in the morning till four or five in the afternoon, without proper food, perhaps a glass of milk hastily swallowed, or entire abstinence, and day after day meeting all sorts of conditions of men, women and children, the women all nerves, and the men all impatience, and the children all frightened, what is to be expected? A few have the happy faculty of so ordering their work that it seems to leave no bad results; but the average man cannot do this, and he arrives at the end of each day with the mental and physical organization in torture. The pinched expression of his face, the sunken look about the eyes, the intense fatigue, are indicative of great nervous depression, and point directly to a minor manifestation of shock. Let this be continued day by day, and month by month, and how many years do you suppose it will be before the over-strained nerves will yield, and fail to perform their proper function in regulating the circulation by keeping up the tone of the arterial system?

As I look back over many years spent in professional work, I recall many familiar faces that have passed away, all too early, from their active work. As I marshal them before me, I remember bright young lives wrecked before they had scarcely begun to develop. This, while undoubtedly true of all callings, has more notable cases in ours. When it is observed that the depressed condition I have referred to eventually may end in centers of inflammation in important organs—lesions that do not explain themselves, an everlasting feeling of weariness that never finds rest—all directly traceable to the continuous strain of routine professional work, it is time to pause. Is the picture overdrawn? I think not. The fact is familiar to all of you, and doubtless comes nearer home to many. What does it mean when the dentist throws himself down at the close of his day and, as he expresses it, is "utterly worn out?" What does it mean that, month by month, he feels less and less able to perform the routine work of the office? What does it mean when, in after years, he may be forced to seek other occupation, or yield up a portion of his specialty? What does it mean that our profession is largely made up of young men? We are familiar with the old doctor, with the old lawyer, with the old merchant; but the old dentists are so few that one is tempted to ask, "The fathers; where are they?" Examples are so numerous of this condition among dentists, that I would simply weary you with the telling; and I will, therefore, give one or two as illustrations. My mind reverts to one very familiar to me in former years. From eight in the morning till eight in the evening, of the long days of summer, he stood closely by his chair. Having partaken of a late dinner, he would throw himself down on the lounge, and lie as one in a profound collapse. This was the almost unvarying habit of years. His periods of relaxation were short and far between. He died at middle life, of paralysis. Another I recall with a large practice. He never knew when to stop. His friends exhausted their powers of persuasion, myself among the number, without result. In time he, too, came to be a wreck, and shortly thereafter passed on into the unseen. But why multiply cases? You understand, as well as I, that there is a limit to the powers of all the organs of the body, and that activity and rest are alike essential to healthy growth; but strain means weakness, and weakness means ultimate death.

## The Various Steps Taken in the Process of Filling Teeth.

DR. JAMES TRUMAN, D. D. S.

THE apparently simple operations in filling teeth, in the evolution from crude modes, combine more thought and active labor than perhaps any other effort in dentistry. The remarkable advance made in the use of soft foil was amply demonstrated in the excellent work done prior to the introduction of cohesive foil. Then followed years of labor with this new form of material, and still a lengthened period with mallet force, till the present stage, when it would seem as tho no further advance could be made in the condensation of gold. The period of wide separations gave way to the opposite extreme, and the reign of force by machinery has about displaced less rapid modes. Has this change been productive of good or evil results? The answer to this question is surrounded with immense difficulty. Facts are not at hand to form an opinion that will not be met with objections. Still, while we cannot definitely say that this or the other process has produced the best results, we may take an intelligent view of the work in its several relations, and find some data which may go far to solve the problem. It will be recognized, I think, as a fact by some of the older men now in practice, that the period of soft foil and wide separations was a time when but little was heard of cervical decay. This has been altogether attributed to the wide spaces, and it is, perhaps, true that to this must be given the greatest share of credit; but there still remains a possible reason to be alluded to hereafter. When cohesive foil was introduced, the old process of hand-pressure was still the prevailing mode, and while some change was made in serrations, the direct force was still used, modified to the character of gold employed. The introduction of the mallet was the beginning of a new era, and subsequent changes from hand mallet to automatic, and from automatic to electric and mechanical, operated by power, was in the order of a natural and progressive development, and brought about a modification of modes in using gold foil.

Now, if it be true—and I think it cannot successfully be denied—that the use of soft foil produced margins more satisfactory than cohesive foil, and that hand-pressure, while not-overcoming altogether mobility to the extent obtained by the mallet, still preserved the cervical border from the attacks of acid better than the greater density obtained by power mallets, then it remains important that the cause should be discovered. That there must be a reason for it, not explained by the mere difference in foils, must be apparent to the most superficial observer. The same result was secured in the use of cohesive foil under hand-pressure. The introduction of the mallet blow was soon followed by complaints that the cervical border on proximal surfaces was almost certain to decay, and in proportion to the multiplication of force has this difficulty been augmented, till many have come to the conclusion that the saving of this border was among the very doubtful operations. That the best operators with the electric mallet have failed at this point is a notorious fact. One of the most skilful in the use of the mallet remarked to me that others might be able to make a good filling at the necks of the bicuspid, but he could not, and he had resorted, in his despair, to tin combined with gold. Others, equally skilful, have followed him with tin or amalgam, thus tacitly acknowledging that present modes are, to that extent, ineffective.

Is there any solution to this rather remarkable condition of things? We have had the fermentation theory and galvanic action brought forward to explain this, and while the former unquestionably has been demonstrated to have an important influence, the latter is still an open question, and both fail to explain the marked difference in results attained by the various modes in use during the past thirty-five years. The explanation must be looked for elsewhere, if it is to be found at all.

It is well-known to all workers in the minute anatomy of dental tissues that the enamel is rarely free from cracks. These are not normal to the tissue, but have been produced by some occluding force, probably in the process of mastication, or it may be from the too sudden expansion and contraction caused by extremes of tempera-

ture. These cracks, by imbibition of fluids, predispose to the production of caries. This is so well understood that no intelligent writer can leave them out of the calculation of the causes of this pathological condition. The extent to which these exist in any given tooth, in life, it is not possible to demonstrate histologically; neither is it possible to determine the character of the enamel border on any tooth during the operation of filling; but, reasoning from the recognized fact that cracks exist, we may fairly presume they are present variably in all enamel, and that as they have unquestionably been produced by some sudden force, their number may be multiplied by an increase of an equal force, or indefinitely in proportion to the power applied. This leads us directly to the question of force in its application to this process. As we have seen that the filling of gold, either soft or cohesive, by hand-pressure, resulted more satisfactorily in the preservation of this delicate border, the question assumes importance, whether the increase of force, by a sudden impact, has not been productive of fractures at that particular spot, more so than elsewhere, on account of the direct mallet action. Tin, tin and gold combined, and amalgam have each been found superior to gold impacted by force. The reasons for this result have not been satisfactorily stated. Tin has been supposed to be more in harmony with dentine,—which is only another mode of expressing ignorance. Electrical action has been brought forward; but the proof is wanting to maintain this hypothesis; in fact, we are left with the practical fact alone that they do preserve better than gold. Till something more suggestive offers, I claim that the explanation can be found in the fact that these materials are ordinarily placed in with hand-pressure, or no pressure, as in amalgam. I am forced to the conclusion that the meaning of immunity from decay in the use of soft foil, tin, and amalgam is not so much in the adaptation to the walls of these materials as it is in the introduction and freedom from injury to the enamel at the border line. This opens, it appears to me, a wide field for investigation. Whether results commensurate with the importance of the subject be attained or not, it should certainly lead to reflection and a better and more thorough examination of the basic principles of practice in this direction.—*Odontological Society of Pennsylvania.*

### An Item of History.

During the John Allen "love feast," held at Sherry's in New York, on the evening of March the 8th, Dr. J. W. Clowes, in response to a toast, said:

JOHN ALLEN, whose fifty years of professional service we celebrate to-night, had more to do with the *free use* of the Rubber Dam than is generally known. When the youthful Barnum, from his rural home, brought a portion of sheet rubber to this city, and *encircled* the *necks* of *six upper front teeth* with its magic bands, the filling of cervical cavities became easy. In my presence this crucial test of a simple device was successfully applied and I stood entranced! My rejoicings, however, were somewhat tempered by a sense of insecurity, a feeling of alarm, for there were intimations of legal restrictions for this new-found aid to dental progress. To shackle the development of knowledge, was not in accord with the spirit of association and kindly feeling then ruling our profession. A timely and happy thought, in my mind, suggested a *conference with John Allen*. He was a man of experience, who had become wise through suffering and litigation, and his opinions were of great weight. Without hesitation, and with emphasis, he advised to make the blessing free. How well his advice was subsequently followed at a dental meeting in Cooper Union is matter for history. The Rubber Dam has had two veritable discoverers.

*Columbus* La Roche first sighted the land; but amid the restricted areas and shallow bays of an insular position he did not realize the immensity of his find. *Americus* Barnum came later in the search, and, in his mainland achievement, we rejoice to-night!

Both these discoverers were good men and true—honored and honest in their dual claims—we remain greatly their debtors. That we are sailing so peacefully the seas of content, and that the breakers and sharks on an inhospitable coast have not engulfed and devoured us, we may thank *John Allen*.

## Practical Conclusions of the Second Hyderabad Chloroform Commission.

THE following are the practical conclusions which the Commission think may fairly be deducted from the experiments recorded in this report :

I. The recumbent position on the back and absolute freedom of respiration are essential.

II. If during an operation a recumbent position on the back cannot, from any cause, be maintained during chloroform administration, the utmost attention to the respiration is necessary to prevent asphyxia or an overdose. If there is any doubt whatever about the state of respiration, the patient should be at once restored to the recumbent position on the back.

III. To insure absolute freedom of respiration, tight clothing of every kind, either on the neck, chest, or abdomen, is to be strictly avoided ; and no assistants or bystanders should be allowed to exert pressure on any part of the patient's thorax or abdomen, even tho the patient be struggling violently. If struggling does occur, it is always possible to hold the patient down by pressure on the shoudlers, pelvis, or legs, without doing anything which can by any possibility interfere with the free movements of respiration.

IV. An apparatus is not essential, and ought not to be used, as, being made to fit the face, it must tend to produce a certain amount of asphyxia. Moreover, it is apt to take up part of the attention which is required elsewhere. However it is made, it introduces an element of danger into the administration. A convenient form of inhaler is an open cone or cap with a little absorbent cotton inside at the apex.

V. At the commencement of inhalation care should be taken, by not holding the cap very close over the mouth and nose, to avoid exciting, struggling or holding the breath. If struggling or holding the breath does occur, great care is necessary to avoid an over-dose during the deep inspirations which follow. When qu'et breathing ensues, as the patient begins to go over, there is no reason why the inhaler should not be applied close to the face ; and all that is then necessary is to watch the cornea and see that the respiration is not interfered with.

VI. In children, crying ensures free admission of chloroform into the lungs ; but as struggling and holding the breath can hardly be avoided, and one or two whiffs of chloroform may be sufficient to produce complete insensibility, they should always be allowed to inhale a little fresh air during the first deep inspirations which follow. In struggling persons, but especially in children, it is essential to remove the inhaler after the first or second deep inspiration, as enough chloroform may have been inhaled to produce deep anesthesia, and this may only appear, or may deepen, after the chloroform is stopt. Struggling is best avoided in adults by making them blow out hard after each inspiration during the inhalation.

VII. The patient is, as a rule, anesthetised and ready for the operation to be commenced when unconscious winking is no longer produced by touching the surface of the eye with the tip of the finger. The anesthesia should never under any circumstances be pushed till the respiration stops ; but when once the cornea is insensitive, the patient should be kept gently under by occasional inhalations, and not be allowed to come out and renew the stage of struggling and resistance.

VIII. As a rule, no operation should be commenced till the patient is fully under the influence of the anesthetic, so as to avoid all chances of death from surgical shock or fright.

IX. The administrator should be guided as to the effect entirely by the respiration. His only object, while producing anesthesia, is to see that the respiration is not interfered with.

X. If possible, the patient's chest and abdomen should be exposed during chloroform inhalation, so that the respiratory movements can be seen by the administrator. If anything interferes with the respiration in any way, however slightly, even if this occurs at the very commencement of the administration, if breath is held, or if there-

is stertor, the inhalation should be stopt till the breathing is natural again. This may sometimes create delay and inconvenience with inexperienced administrators, but experience will make any administrator so familiar with the respiratory functions under chloroform, that he will in a short time know almost by intuition whether anything is going wrong, and be able to put it right, without delay, before any danger arises.

XI. If the breathing becomes embarrassed, the lower jaw should be pulled, or pushed from behind the angles, forward, so that the lower teeth protrude in front of the upper. This raises the epiglottis and frees the larynx. At the same time it is well to assist the respiration artificially till the embarrassment passes off.

XII. If by any accident the respiration stops, artificial respiration should be commenced at once, while an assistant lowers the head and draws forward the tongue with catch-forceps, by Howard's method, assisted by compression and relaxation of the thoracic walls. Artificial respiration should be continued till there is no doubt whatever that natural respiration is completely re-established.

XIII. A small dose of morphia may be injected subcutaneously before chloroform inhalation, as it helps to keep the patient in a state of anesthesia in prolonged operations. There is nothing to show that atropine does any good in connection with the administration of chloroform, and it may do much harm.

XIV. Alcohol may be given with advantage before operations under chloroform, provided it does not cause excitement, and merely has the effect of giving a patient confidence and steadying the circulation.

The Commission has no doubt that, if the above rules be followed, chloroform may be given, in any case requiring an operation, with perfect ease and absolute safety, so as to do good without the risk of evil.

EDWARD LAWRIE (President),	
T. LAUDER BRUNTON,	} Members.
G. BOMFORD,	
RUSTOMJI D. HAKIM,	
EDWARD LAWRIE, Surg.-Major.	

Hyderabad, December 18th, 1889.

### Chloroform Administration and the Hyderabad Commission.

(Editorial in *Omaha Clinic*.)

OUR readers will remember the appointment of a commission by the government of the Nizam, at Hyderabad, in the year 1888, consisting of Surgeon Hehir, I. M. D., President, and two members, Messrs. J. A. Kelly, L. R. C. P. of S. Ed., and A. Chamaretta, L. M. S. This commission was called for by Surgeon-Major E. Lawrie, Residency Surgeon, Hyderabad, because, having always believed in the truth of Syme's teaching, that chloroform can be used judiciously, so as to do good without the risk of evil, he desired to show by experiments upon dogs that in death from chloroform the *respiration always stops before the heart*. The experiments of the commission led them to conclude "that chloroform may be given to dogs by inhalation with perfect safety, and without fear of accidental death, if only the respiration, and nothing but the respiration, is attended to throughout."

To these conclusions the *London Lancet* of March 20th, 1889, interposes this demurrer: "All those who are familiar with chloroform are well aware that syncope, when primary, as a rule supervenes in the initial stages of inhalation, while secondary syncope, due to respiratory embarrassment, is the result of accumulation of chloroform in the blood, leading to paralyses of the medullary centres, and occurs in a late stage of the administration. The primary syncope it is rarely, if ever, possible to induce in dogs, although, unfortunately, it is this form of chloroform heart failure, which does occur in human beings, and which it is almost impossible to remedy."

To these exceptions Dr. Lawrie interposes, and we think correctly, that it is conceivable that syncope may occur in the initial stages of inhalation of chloroform, though he has never met with a single instance of such an accident. The public



dread chloroform more than they do operations, and fainting from fear in the initial stages of inhalation is intelligible, so is failure of the heart from shock, induced by operative interference, before anæsthesia is complete.

With regard to the secondary syncope, the *Lancet* states that it is due to respiration embarrassment (through the respiratory centre?), which is an indirect cause, and, in the same sentence, that it is the result of paralyses of the medullary centres (circulatory?) from accumulation of chloroform in the blood—which is a direct cause. Both these statements cannot be true. The truth is that secondary syncope has no more real existence than primary syncope. In poisoning by chloroform the heart fails when the respiration ceases, and never before. With the cessation of respiration, the further accumulation of the drug in the blood ceases, and the heart rapidly, or gradually, stops beating, as a direct result of the stoppage of respiration, and as an indirect effect of the poisoning with chloroform.

The *Lancet* would trust to the heart and circulation for signals of danger in chloroform administration. Our contention is that, if the administration is ever pushed far enough to cause the heart to show signs of danger, the limits of safety have already been exceeded, and a fatal result must almost inevitably ensue. So far from disregarding the heart as a factor in chloroform dangers, we say that any affection of the heart, either direct or indirect, is the one danger to avoid. But we say, further, that the respiration invariably gives warnings when a dangerous point is approached, and consequently that it is possible to avert all risk to the heart by devoting the entire attention to the respiration during chloroform administration.

Syme taught: "We are guided as to the effect of chloroform not by the circulation, but entirely by the respiration."

Erichson teaches: "When fully anæsthetized the patient requires the most careful watching by the person who administers the chloroform; his finger should never be off the pulse nor his eyes taken away from the countenance of the patient." On the one side Dr. Lawrie and the first Hyderabad commission, on the other the *Lancet*, the commission of the Royal Societies, and many distinguished investigators.

His royal highness, the Nizam, realized this contradiction and also the importance, if possible, of a final adjustment of the differences. He, therefore, offered one thousand pounds to defray the expenses of one or more experts, to be selected by the *Lancet*, to go to Hyderabad and repeat the experiments of the first commission, and to make such others as they may deem proper. The London *Lancet* selected as its representative one high in authority in pharmacological work and as a scientist. "It may, perhaps, be considered as a further advantage that in his work 'Pharmacology and Therapeutics' doctor Lauder Brunton, the *Lancet's* choice, has very decidedly stated that one of the dangers resulting from chloroform is death by stoppage of the heart."

Dr. Lauder Brunton and Surgeon-major Bomford arrived at Hyderabad October 21st, 1889, and the second commission was constituted as follows: "Surgeon-major G. Lawrie, President; Dr. Lauder Brunton, Surgeon-major G. Bomford, Dr. Rustomgi (the Nizam's medical service), members; Dr. Bomford, Secretary. Associated with this second commission were the President and members of the first commission, and Mr. Wm. Mayberry, who administered the chloroform.

This commission killed 268 dogs and 31 monkeys outright, and 86 dogs and 39 monkeys were subjected to artificial respiration at varying intervals, after the natural respiration had been arrested by chloroform. The animals which were killed had chloroform administered to them in every possible way, and under every conceivable condition.

The immediate result of this very important work was the conversion of Dr. Brunton to the views of Dr. Lawrie and the first Hyderabad commission, the position of which was sustained in every particular by the second commission. Secondly, it changed the position of the London *Lancet*, as expressed in the editorial of January 18th, 1890.

"From the report we now publish, it will be seen that the discrepancy between the views of different schools arises from the fact that sufficient consideration has not been given to the conditions under which chloroform is given. Though it may paralyze the heart if applied directly to it, yet this condition does not occur in practice, for here it is neither applied to that organ, nor yet is it blown forcibly into the lungs. It is inhaled by the patient, and when this is the case it stops the respiration before the heart. The practical outcome of the research would appear to be that deaths from chloroform are inevitable. They are therefore preventable, and by due care in its administration they may be with certainty avoided."

### A New Use for Chloroform.

ACCORDING to the *Wiener Medicinische Presse*, Mr. Clemens has discovered that very mild inhalations of chloroform is almost a specific for pneumonia. "Out of forty-two cases," he says, "I have not lost one. These inhalations cause the defibrination of the blood in the lungs and prevent hepatization. There is no doubt, also, some dynamic influence on the brain and on the pneumogastic nerve."

His manner of treatment is to slightly saturate a compact lump of cotton: this to be wrapt in a thin, loose layer of cotton, to prevent unnecessary waste; if this is surrounded on all sides but one with sheet rubber or some other impenetrable cover, all the better. This ball is held with the open surface toward the nostrils, at a little distance, and breathed as a perfume, as the patient can easily bear, and at intervals, variable according to the symptoms and the susceptibility of the patient.

It soothes the nerves, mitigates pain, improves the breathing, gives greater capacity to the air cells of the lungs, defibrifies the blood, and shortens the duration of the disease. From the first inhalation the respiration becomes deeper and the inflammation and fever lowered.

He often adds equal parts of alcohol to the chloroform, especially when given during the night.

### Painless Tooth Extraction.

EDITOR *Medical World*:—I write for a point of information, in the hope that you, or some of the household may give the desired instruction.

What is used by quacks in the painless extraction of teeth? I expect to be laughed at by many, for I also thought this an impossibility. But now I know whereof I speak. There has been a patent medicine seller in our town lately. He has pulled several hundred teeth, and not one of his patients has even complained of pain.

He has broken many, and failed to get out old roots, but never has he drawn even a groan from the patient. He rubbed a liquid on the gums, and pulled the tooth *immediately*. I have tried cocaine, and other local anæsthetics, but when I begin to pull they yell and arouse the neighborhood, as usual. I do not claim great skill in tooth extraction, but neither did the quack. He broke a great many, and some of his patients came to me afterward for relief. I have had teeth pulled by skilful dentists, and they cause as much pain as it is possible to bear, as many will testify. Then how is it that the quack can pull hundreds, for all classes of people, on his stage, and in his office, and not one of them show any signs of pain?

Morgan City, La.

G. H. DOUGLAS, M. D.

A great surgical achievement has just been made in this city. A Rochester physician, by accident, became paralyzed in the right arm and leg, and also lost the power of speech. The physicians at the Roosevelt Hospital, after carefully studying the case, raised a circle of the skull an inch in diameter, found a clot of blood on the brain and removed it. The paralysis disappeared, and the power to articulate in speech came back. Some years ago a man wounded in the late war, who had subsequently been believed to be a driveling dementia, was restored by some surgeons who lifted the skull in a similar manner, and instantly the man opened his eyes and said: "We were at Manassas yesterday; where are we to-day?"

## Microbes.

THE microbic theory of human infirmities has been greatly overdone. When the "microbe of senility" was reached, a wholesome reaction set in, and it is now generally conceded that pathogenic micro-organisms may cause disease accidentally, but that the primitive origin of disease, specially infectious diseases, is to be sought in more elementary conditions, the removal of which is rather the problem of hygiene, than the task of therapeutic treatment. Nevertheless, the presence of pathogenic microbes in the organism being an undoubted cause of morbid phenomena, its prevention or suppression has continued to occupy the attention of the medical world. *Antisepsis* and antiseptic methods have made great strides, and there is scarcely a day without some new antiseptic being proposed and recommended. Yet, among their number two alone have continued to maintain an uncontested superiority: *sublimite* and *carbolic acid*, tho with regard to the latter, the eminent Professor Billroth, of Vienna, has repeatedly shown its danger in the hands of inexperienced, and especially unprofessional, persons.

Recent investigations of more than a hundred antiseptic substances have generalized the fact that their action is different in degree and kind, according to the specific microbe it is applied to. Another interesting result of recent researches is the important part played by temperature in antisepsis. Some of the most virulent bacilli resist low temperatures, and even congelation, while moderate heat, sometimes not much above the natural heat of the human body, arrests their development. Typhus-bacillus, while resisting congelation and presenting rapid development at 4° above zero, cease to produce culture at 46°. Symptomatic Anthrax-bacillus loses its virulence at 100°, while a temperature as cold as -130° has no influence on it. Cholera microbes are killed in a liquid of 50° to 55°. Pneumococcus Fraenkel, while not developing below 24°, is arrested in its development by temperatures above 42°.

The most important result which the theory of pathogenic microbes has produced in later times, is the general agitation against infection by the secretions of phthisics. Sputa and flies are very active agents in the transmission of this terrible disease which claims for its victims a surprisingly large percentage of suffering humanity. Numerous hygienic measures, partly founded on prophylactic antisepsis, have been proposed for schools, hospitals, etc., and are being introduced in foreign countries, more than in the United States.

The therapeutic treatment of phthisis by antiseptic methods has failed to give the results anticipated, and for a time even loudly claimed for it. In the foremost rank of these methods was inhalation of hydrofluoric acid, for which costly institutions had been established in Paris. But this powerful corrosive was more injurious to the patient than to the disease.—*The Pacific Med. Record*.

DR. T. B. WELCH :

DEAR DOCTOR :—I have taken the "ITEMS" six years, and cannot now "keep house without it." I would like to add to the list of curiosities those in my possession and those I have seen in my practice.

I have a cuspid one and one-half inches long by one inch ; an upper and a lower cuspid, with two roots ; an upper bicuspid, with three roots ; two upper molars, with four roots, and one with five ; two lower molars, with three roots, and one with four ; all these well-developed.

I have a lady patient with five upper well-developed incisors, nearly all the same size. I have a young lady patient who never had the upper lateral incisors ; her mother never had them, nor her mother's mother ; her four sisters have them. I have extracted for two misses, who are under twelve, and cousins, an ill-formed supernumerary between the upper incisors. I have a molar covered with tartar two and one-half inches in circumference.

C. A. MARVIN.

Torrington, Conn.

### Soap Solution.

THIS is a handy thing to have in the laboratory. To make it, gather up all the small pieces of white Castile soap, and shave them up thin and fine. Put them into an iron pan with just enough soft water to cover them, and place on the stove, or over your gas spider, and heat gently, stirring slowly, until the soap is all dissolved and the solution becomes uniform and of one homogenous mass. Care must be taken not to have much heat, or the soap will swell rapidly and "boil over."

Before you commence the boiling operation, select a broad-top bottle and fit a brush nicely into the cork for future use. As soon as the soap is thoroughly dissolved, pour it into the bottle while hot.

This soap solution should stand on the work-bench, within easy reach. Coat your model with it before immersing in cold water, when about to make a trial plate of gutta-percha. It prevents the hot plate from sticking to the cast and marring the face. When the case is inverted in the lower half of the flask, and properly trimmed and ready for the upper half, coat the model, plate, and wax—the whole of it except the *teeth*—before setting on the upper rim. This is somewhat antagonistic to the teachings of Professor Wildman, whose instructions were to "use soap solution only on naked plaster." But experience is my dictator. After packing your case, soap the face of the model again just immediately before bringing the parts together to prevent adhesion, if you should need to separate them again to either add more rubber or to remove some. The soap solution can be used for coating the impression before pouring the plaster to make a cast, if you wish colored plaster. But I prefer to use white plaster, and varnish my impression with shellac, to make a "color line" of demarkation. The coating of the inside of the flask with soap solution, before using, will prevent the plaster from adhering so tenaciously.

Bristol, Pa.

G. W. ADAMS.

[There used to be a patent on this process thirty odd years ago; we paid \$25.00 for the privilege of using it.—ED. ITEMS.]

### Nerve Capping.

I FIND in over six years of continued use of oxide of zinc with carbolic acid (paste form) as a capping for nerves, we have found uniform success when it is used on exposed pulps, where there is *not* much inflammation. I first place the paste over the exposure only, over this I carefully place oxyphosphate of zinc; sometimes I leave this for ten days or even longer; at other times I at once prepare anchorage and fill. There are three necessities for success. First, the cavity must be cleaned with great care, and the paste put on exposure carefully; second, we must not attempt treatment when the pulp is much inflamed; third, the after care of the capping is important.

Eufaula, Ala.

C. L. BOYD.

In a recent work on irregularities we find the following statement regarding thumb-sucking: "In each case the jaws are held temporarily apart, so that there could be no occlusion of teeth, even tho they occluded normally when the jaws were closed. This leaves the side teeth free to change their position if any influence is exerted to produce that result. In the act of sucking, the cheeks are drawn in, and the strong pressure thus brought to bear on the bicuspid and, occasionally, the first molars causes them to be bent inward. In this malposition they are frequently confirmed by the opportunity thus given to the other molar teeth to move forward, of which they are not slow to take advantage. The result is the deformity known as the 'saddle-shaped' jaw."

DEAR DOCTOR:—I see in our March ITEMS OF INTEREST that Dr. H. R. Sackett extracted both lower central incisors for a babe eight months old. I would like to ask the doctor his reason for extracting at so early an age?

Gosport, Ala.

W. P. CANNADY.

**Pyorrhea Alveolaris.**

J. R. BELL, D. D. S., CLEVELAND, O.

SCIENTIFIC experiments have often been published describing the accumulation of calcareous deposits about the teeth, giving its analysis, etc., therefore, I will omit such descriptions and devote my time to the common causes and simple treatment of this disease. It may be laid down as a rule that inveterate meat eaters are mostly subject to diseased gums, and that removing the deposit, cleansing the inflamed pockets with antiseptics, changing the patient's diet from meat to a vegetable, will, in a majority of cases, restore the tissues to a healthy condition. Treatment in every instance must be graduated according to the different stages in which the disease is found. I do not include salivated subjects, or those who are of a scrofulous diathesis, for with these causes the removal of the teeth in chronic conditions seems to be the only alternative. These symptoms, as you all know, are hard glandular tumors, seen commonly on the neck or under the chin, and a preternaturally secretion of saliva. Where there is a scorbutic tendency, and this is most common, and is characterized by livid spots, varying in size, paleness, languor, depression of spirits, fetid breath, spongy and bleeding gums, teeth slightly loose, we may state to our subject with the utmost assurance that the disease can be checked, teeth tightened, and parts restored to nearly their normal condition. Our first step is to remove the deposit, when an assistant is indispensable, for therein lies the secret of success. As the deposit is detached, the assistant should spray the pocket with a tepid solution of bichloride of mercury, 1 grain to 1 pint of water; by so doing all the foreign particles are removed from the bottoms of the diseased pockets, the soft tissues are thus thoroughly sterilized, relaxing the tissues so that the small sinuses are cleansed of their contents. Following this, dry the gum margin with antiseptic cotton pellets and inject fresh peroxide of hydrogen, using it freely to reach every point, then syringe again with the bichloride solution, repeating the process till the effervescing action ceases. If now sure that all scales are detached and floated out of their little chambers, the loosened festoons of gum should be pressed against the teeth, when Nature, with her granulating process, will finish the adhesion of gum and periosteum anew. In the first stages of this disease this treatment will be sufficient, except to change the patient's diet from meat to vegetables and fruit, instructing them in the use of the prophylactic brush and the preventive properties in Castile soap as a dentifrice. With chronic cases more stringent remedies will be necessary, where teeth are loosened, process absorbed, thick, creamy pus exuding, margins of gums purplish in color, covering a portion of the crowns of the teeth. Less hemorrhage, and much less sensitive with these conditions present. Stimulating remedies are necessary, and we have found that nothing answers the requirements of the case as well as chemically pure sulphuric acid. It has a threefold object—1st, dissolving any undetached scale of tartar; 2d, removing points of necrosed alveolus; and 3d, stimulating blood to the depleted tissues and healing them by first intention. A cleansing wash should be used thrice daily, after meals, following the thorough application of soap. I find bichloride admirable, one grain to a quart of water, never omitting to label the bottle, poison, and explaining its value as a germicide. Lastly, an astringent wash to be used just before retiring.

Tinct. arnica.....	1 oz.
" myrrh.....	½ oz.
Acid carbolic.....	20 min.
Oleum gaultheria.....	1½ dr.
Alcohol.....	2½ dr.

By earnestly impressing on patients the value of this self-treatment, assuring them that hope of saving their teeth lies with themselves, we can accomplish more than can be done otherwise, at the same time gaining their confidence, schooling them in a habit which will be of permanent benefit to at least one generation.—*Ohio Journal.*

## Excessive Hemorrhage After Extraction of Teeth—A Case.

DR. C. H. M. NEAL, PHILADELPHIA, WITH REMARKS BY  
T. D. DUNN, M.D., WEST CHESTER, PA.

SOME time ago an elderly woman called to have some teeth extracted. She enjoyed excellent health, and is the mother of two children. I gave her nitrous oxide gas, and extracted on the right side of the upper jaw, the second bicuspid and the first molar, and on the left side the first and second bicuspids, and the first, second, and third molars.

Before leaving my office, the hemorrhage ceased. About two hours later the patient returned with copious hemorrhage from the right side of the upper jaw, but no hemorrhage from the opposite side. I cleaned out the cavities separately, and applied Monsell's solution on cotton.

The blood pressure was so strong as to wash the compress completely out of the cavities. Finally, by strong compression by means of a roller bandage, I partially checked it. The hemorrhage then came out of the ear. The patient was very much exhausted from the loss of blood. I gave internally gallic acid with ergot. After I checked the hemorrhage, I applied the actual cautery to the alveolar cavities. It was fully one hour from the time the patient came in till she departed for her home. I was told by her physician that after she arrived home—which was about twenty miles from the city—the hemorrhage returned, and that he had the same trouble with her. I cannot understand why the hemorrhage was only from the right side. I pulled out more and larger teeth on the left. I have heard that this woman would bleed for hours if she cut any portion of her body, or even scratched her hand. This is said to occur only when she is cut on the right side of the body. If she happens to cut herself on the left side, she will bleed only a short time.

### REMARKS BY DR. T. D. DUNN.

Unfortunately, in Dr. Neal's interesting notes there is no mention of a family disposition or tendency to bleed, without which there must be some uncertainty whether the patient is a true subject of the congenital and hereditary disease, hemophilia, which is the most hereditary of all diseases. The most remarkable family of bleeders on record lived in the village of Tenna, in the canton of Graubundten, as described by Anton Hoessli, who has traced the disease in his family for two hundred and fifty years. I think the fact of the bleeding being confined to the right side of the body in Dr. Neal's case, is a mere coincidence. I can find no record of unilateral hemorrhage in this disease, and it would not be in accordance with our knowledge of its pathology. Probably, as suggested, "two circumstances combine in hemophilia—a congenital frangibility of the vessels, and a defect in the coagulability of the blood; but whereon these depend we are as yet ignorant."

The tendency to bleed after the extraction of the teeth, as after all minor operations, is exceedingly common in hemophilia. Hemophiliasts seem predisposed to rheumatic toothache, and frequently apply to dentists who are unaware of the bleeding tendency, instead of their medical adviser. They should, therefore, be especially warned of this danger by the family physician.

The treatment of Dr. Neal's case was very judicious. In several recorded cases after the introduction of cotton into the alveolus, a cork has been trimmed to fit the cavity, and by closing the jaw, held sufficiently firm, to control bleeding, the pressure being gradually withdrawn as the hemorrhage ceases.

The quantity of blood lost after the extraction of teeth has in some cases been enormous. Krimer reports a patient who lost four and a half pounds of blood in twenty-four hours, and Schaefer's lost four pounds daily for several days after an extraction. Dr. R. Coates relates a case in the *North American Medical and Surgical Journal*, vol. vi, page 45, 1828, in which three gallons (twenty-four pounds) were lost in eleven days. The marked tolerance of bleeders for great losses of blood, and the rapidity with which they recover, are more remarkable than the severity of the hemorrhages.—*Med. and Surg. Rep.*

## Advertising Dentists.

DR. J. E. FITZGERALD, YOUNGSTOWN, O.

THE note from Dr. J. B. Willmott, in the February ITEMS OF INTEREST, in which he ranks advertising dentists as, in some respects, below the shysters, quacks and impostors of other professions, is manifestly unfair to a large and respectable class of dental practitioners. What is a dental quack? Is it a man who honestly tells the public, through the columns of a newspaper, "I do such and such kinds of work; I have such and such grades of material; take your choice of the article you want at a fair and reasonable price?" Is it not rather the man who sizes up a patient according to his clothes or his bank account, and charges him an extortionate price if he thinks he is willing to pay it, and who at the same time is ready to reduce his charges from one-third to three-fifths rather than see a patient leave his office, whispering in his ear that this is a "special favor," not to be mentioned outside, as it would injure his practice? Advertising quackery is not the meanest thing or the least respectable.

The truth is, all dentists do different grades of work, whether they proclaim the fact or not. It is absolutely necessary. Thousands of patients, who apply at dental offices, are in circumstances which preclude them from paying for the finest possible grade of work. If twenty-five dollars for a set of artificial teeth and five dollars for a filling were established prices in all offices, the preservation and replacement of teeth would be luxuries utterly beyond the reach of people in narrowed circumstances. If this be true, what possible charge of charlatanry is this against the dentist who frankly acknowledges that he does different grades of work according to the abilities or wishes of his patients? The multitudes of intelligent and cultivated people, who patronize the "advertising dentist," are the most practical evidence that his announcements in the newspapers are not found disgusting by the public. In actual fact, it is not the man who advertises that shuts himself out from the most desirable class of practice, but the "code of ethics" dentist, who sits in the seventeenth century old arm-chair waiting for trade, and who don't get it because nobody knows where to find him, or knows what he could do if he should be found.

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## The Dental Protective Association.

CHICAGO, March 24th, 1890.

DR. T. B. WELCH:

The Protective Association is progressing nicely. We have a large membership and a large amount of testimony in regard to crown and bridge work antedating all patents owned by the I. T. C. Co.

The company do not dare sue any member of the association, nor proceed with the old suits taken charge of by the association. We guarantee protection against any of their patent claims, and we take charge of suits and pay expenses. The membership fee is only \$10.00, but will be increased soon.

Yours, truly,  
J. N. CROUSE.

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"We."—A well-known merchant once said: "I would not give much for a boy who does not say 'we' before he has been with us a fortnight." The boy who says "we" identifies himself with the concern. Its interests are his. He sticks up for its credit and reputation. He takes pleasure in his work, and hopes some day to say "we" in earnest. The boy will reap what he sows, if he keeps his grit and sticks to his job. You may take off your hat to him as one of the solid men of the town. Let his employer do the fair thing by him; check him kindly if he shows signs of being too big for his place; counsel him as to his habits and associates, and occasionally show him a pleasant prospect of advancement. A little praise does an honest boy a heap of good. Good luck to the boy who says "we."

## For Our Patients.

### Climbing to the Top.

NEVER look behind, boys;  
 Up, and on the way!  
 Time enough for that, boys,  
 On some future day;  
 Tho the way be long, boys,  
 Fight it with a will;  
 Never stop to look behind  
 When climbing up a hill.

First, be sure, you're right, boys,  
 Then with courage strong  
 Strap your pack upon your back,  
 And tug, tug along.  
 Better let the lag-lout  
 Fill the lower bill,  
 You strike the farther stake-pole  
 Higher up the hill.

Trudge is a slow horse, boys,  
 Made to pull a load,  
 But in the end will give the dust  
 To racers on the road.  
 When you're near the top, boys,  
 Of the rugged way,  
 Do not stop to blow your horn,  
 But climb, climb away.

Shoot above the crowd, boys,  
 Brace yourselves, and go!  
 Let the plodding laud-pad  
 Hoe the easy row.  
 Success is at the top, boys,  
 Waiting there until  
 Brains and pluck and self-respect  
 Have mounted up the hill.—*James Whitcomb Riley.*

### A Fatal Case of Carbolic Acid Poisoning.

DR. S. T. RICHMAN.

ON July 26, 1889, at noon, a child seven months old received a superficial burn on the left arm and thigh from a cup of hot coffee. A mixture containing equal parts of carbolic acid and sweet oil, was applied by the mother, being a recipe taken from a domestic medical book. About half an ounce of 95 per cent. carbolic acid was thus used. In two hours the child passed into a condition of stupor, which, continuing, alarmed the family, and I was summoned.

Arriving at seven P. M., I found the child lying quietly, with the exception of an occasional movement, made by flexing the legs on the thighs and these on the abdomen, and then forcibly extending them. The eyes were fixed, the pupils contracted to the size of a pin's head, the pulse 120, weak, breathing irregular, occasionally sighing, swallowing performed with great difficulty, mucus expectorating rather than vomiting, the odor of carbolic acid being plainly perceptible in the breath.

Not having atropine with me, I administered four minims of the fluid extract of belladonna by the mouth, a portion of it being rejected. At the end of an hour the pupils had begun to dilate, a slight flush was barely perceptible, and swallowing less difficult. A small quantity of whiskey was then given, with two minims of belladonna.

At the end of another hour the pupils were normal, the erythematous blush quite perceptible, swallowing somewhat improved, pulse and respiration the same. Learning that no urine had been passed since noon, and not desiring to substitute



belladonna for carbolic acid poisoning, I discontinued the former and ordered small doses of nitrate of potassium and whiskey to be given during the night.

At eight o'clock next morning the pulse was 160, weaker, temperature 103° F., face blanched, pupils larger than normal, eyes fixed, the child lying quietly. The mother showed me a napkin with a dense, smoky stain, three of which had been removed during the night, adding that the stains would not wash out. The child continued to grow weaker, the pulse rising higher, till convulsions set in at five o'clock, and death occurred an hour later—thirty hours from the application of the acid.—*K. C. Med. Index.*

### Uniting a Broken Jaw.

DR. H. L. HARLAN.

**EDITOR ITEMS:** As it is some time since there has been a published account and treatment of a broken jaw, I will relate an experience that came under my treatment a few weeks since: Mr. Y. was thrown violently from his buggy, breaking and badly fracturing his lower jaw in three places, and knocking out the second bicuspid tooth.

Break first, between the central and lateral incisor; second, at first bicuspid and first molar; third, between the first and second molar. The bone cutting through the cheek and throat in three places, which made soreness and swelling so great as to make impossible cardboard pressure from below that is usually resorted to.

Treatment.—I made two props of equal size, placing them back in the mouth to hold the jaw, open to equal width on both sides, pulled the fractured and broken parts together, and, with the aid of an assistant, held them there. After clearing the mouth of mucus, I flowed over and around the teeth thin plaster, without the use of an impression cup. After the impression had set, broke it into sections and removed it. I then made the splint the thickness of ordinary sheet wax, to cover the broken parts, and extended to the first molar on the sound side, perforated with holes for the reception of wire. By using very fine silver wire I ligatured each tooth the same as is done for rubber dam, letting each piece extend out of the mouth six inches. Then, by running the wire through each respective hole in splint, I pushed the plate down, drawing up the wire at the same time, which brought the broken parts up in position. Then, by tying it, I made the parts tight and stationary. After six weeks I removed this appliance, and found the jaw strong and sound. Some of the teeth and alveolar process were a little loose. But I think a few weeks will bring them all right.

A Waynesboro doctor rejoices in the apt name of Bonebroke; while in Philadelphia, Dr. Gruel practices in Dr. Physick's ancient bailiwick, and Dr. Toothaker extracts rebellious molars.

Milk, exposed for a time to the fumes of tobacco, is poisonous.

Customer.—“I see you are advertising full sets of teeth for \$8.00.” Dentist (cautiously). “Y-e-s, sir. Do you live at home?” Customer: “No, I board.” Dentist (with dignity): “You certainly cannot expect an \$8.00 set to be of any use in a boarding-house, sir. My charge to you will be \$25.00.”—*Luminary.*

Revenge is Sweet.—Dentist—“Now, sir, just a second, and the aching tooth will cease to trouble you.”

Patient—“Going to yank it right out, doctor?”

“Yes.”

“Well, don't hurry at all. Worry it around a little while, jab it with your knife, and squeeze it tight once or twice before you yank it. The blamed thing's been keeping me in agony for six months, and I want it to feel how it is to be tortured itself.”—*Burlington Free Press.*

## *Editorial.*

### Our Position at the Chair.

OUR position at the chair is not of small moment. By the habits of some dentists, one would suppose the patient has no rights the dentist is bound to respect. He lolls and leans and crowds on his patient, making of him his cushion, his staff and his main support, till the patient feels crushed and smothered and exhausted. We have seen a dentist so rudely lean and press against his lady patients as to be repulsive and immodest. There may be no resistance in plain English to all this, *but it is remembered and reported* much to the dentist's detriment.

Then, too, the dentist has rights he owes to himself. It will not do to indulge his patient in any position he may choose to assume. Many dentists work to great disadvantage to their work, and to their comfort and health, by allowing their patients to loll about, double up, or turn about as their fancy pleases them. We should insist on their assuming positions advantageous to us and our work. The mere position of the head is of great importance. Some chairs are made so wide that our patients, unconsciously, get away from us, and we are obliged to lean half over them to get at our work, or have frequently to bring them back within proper reach.

But, independent of the position of our patient, there is much to be observed in our own habits of position. Standing on one leg for an hour at the time is, of course, injurious. Standing in a stooped position for a whole day is suicide. Twisting oneself into a corkscrew to see our work is nonsense. Habitually leaning hard against the arm of the chair is sure to bring on internal complaints. Having our mouth so near the mouth of our patient as to breathe his breath and the rottenness in his mouth, is of course, deleterious.

The dentist should stand erect, in an easy, self-possessed and self-supporting position, as much as possible. The more props and supports he has, the more he wants, the more awkward will be his position, and the more unhealthful. Spinal complaints, consumption, vertigo, and many other complaints would thus be avoided. His chair should be so easily raised and lowered, and turned to either side, and back and forward, that he can bring his patient in any position to suit his work. The head, especially, should be controllable, in aspect and position, without serious inconvenience to the patient.

The dentist is to be congratulated that of late there have been so many improvements in chairs for the better convenience of both patient and operator. One can now often stand erect quite behind the chair, to great advantage to his work and to his convenience and health. It is a fine thing, too, if he can drill both hands as, at times, to relieve his position and better his work; standing, sometimes, on the left side of his patient, or at least with his left hand working on the left side.

The sitting position on a one-legged stool, or at least, one easily adjustable in height, and position, and incline, is a great convenience, and a relief to our position. At first, it seems awkward, but soon becomes a luxury.

Sometime since we said to a coughing, cadaverous, consumptive dentist of thirty-five or forty: "Why do you take the trouble of leaning over your patient so much, and twisting yourself about, and trying so hard to take the breath of your patient, that you may have an excuse for that cough, and that you may look lean, lank and consumptive? Is it a luxury to indulge in the one that you may have the other?"

"O, I know it is all wrong," he replied, "but the habit has so grown on me I can't help it."

But in blaming, he will not blame himself for his miserable, short life, but his business. It is in this way dentistry has the reputation of being unhealthy. We were in active practice nearly thirty years, and were much more healthy at the end of that time than at its beginning, and now at sixty-five, work more hours, and that pleasantly, than since we were a young man.

Sometime since we were in the office of a noted, successful, busy dentist when a celebrated physician entered. It seems it was by appointment.

"I fear I have an internal abscess, growing on my left side, just here," said the dentist, putting his hand just below the floating ribs. "I have consulted quite a number, but find no relief, nor suggestion for its cause or cure. For the last three months the pain has been almost intolerable."

"I think I can tell you all about it, and its remedy," said the physician. "Let me see you work at the chair."

Taking the place of his assistant, who was filling a tooth, he proceeded to finish the filling.

"That is enough," said the physician; "I am confirmed in my diagnosis and means of cure. Stand at the chair again, in the position of filling a tooth, and see for yourself how you press your side against the arm of that chair. It keeps up a constant pressure and irritation. I wonder you have been able to endure it so many years as you have. Saw off the arm of that chair; it has no business in any dental chair; bring your patient up plump against you; and, that he may not have a chance to get away from you, have the further arm movable, so that for a small patient you can move that arm toward you, till you are not obliged to do your work at arms length, cramping your side, and tiring your back and breaking your neck. Stand up at your chair, and you are good for ten years' more service; if you don't, I warn you to stop work now. That is my diagnosis and my treatment."

That was ten years ago, and tho the author and the professor and the busy practitioner was then sixty, he is still at his chair, and without an internal abscess to trouble him.

#### THON.

[O]UR marked letters have the following sounds:

āte, ēte, īte, ōde, ūse; äre, âll, fûl, mōve.

R has the vowel sound of er, and the consonant sound of re.

A, b, c, I, o, u, y, and r are sometimes used as words, as: "Y, to be shūr, I c I o u a kâl now u r mī nabr."

Where only consonants are sounded, only consonants are used, as: "I ofn brnd mī lādłz when I lābrd in metłz."

When the sound of a vowel is obvious, no mark is used, as al instead of âl, ne instead of nē, no instead of nō, u and ur instead of ū and ūr.]

How prejudist we r agenst inovashunz. Even tho wun ma b gùd in itself, we r slo to adopt it, or to giv it eni favr.

For meni yerz al akurāt rītrz hav sēn the advantaj ov a komun prsnl pronoun —wun that shal inklūd he and she, him and hr, himself and hrsel. We hav al aknoledj that such sentensez az the foloing r âkwrd:

"Evri tēchr must b in hiz or hr sēt, to ansr to hiz or hr nām, befōr 9 O. K.; and he or she must lēd hiz or hr pūplz to hiz or hr rûm in an ordrlī manr, imediatli aftr prārz. Eni tēchr fāling ov hiz or hr dūti must report himself or hrsel to the prinsipl."

Sum hav propōzd, in such sentensez, to ūz the plural prsnl pronoun, as: Evri tēchr must b in thar sēt, etc. But this iz ungramatikl. Uthrz wùd ūz the maskulin jendr; thus, Evri tēchr must b in hiz sēt, etc. But this duz violens to the fakt whar thr r tēchrz ov both seks.

How much beter this sentens wil rēd if we aksept the nu wrd, thon, propozd az a komun prsnl pronoun. Thus:

"Evri tēchr must b in thon'z sēt, to ansr to thon'z nām, befōr 9 O. K.; and thon must lēd thon'z pūplz to thon'z rûm in an orderli manr, imediatli aftr prārz. Eni tēchr fāling ov thon'z dūti must report thonzelf to the prinsipl."

### Keep a Good Supply of Teeth and Materials.

THE lack of them is embarrassing, often perplexing, and sometimes as injurious to a good practice as it is unsatisfactory to patients. During a practice of thirty years, we seldom allowed our stock to go below five hundred dollars' worth.

With a good supply of teeth to select from, you can do better work, and you are sure to impress your patients with your thrift, competency, and liberal professional character. And it does not cost much; in fact, it is economy, for while you only lose the interest on your money invested, you get better discounts in buying, and lose fewer cases because prepared to do them.

Of course, an extra capital of five hundred dollars is considerable to a dentist who is living from hand to mouth. But it is a disgrace to live so. With studious and business habits, and a determination to be skilful and to keep abreast the requirements and developments of the times, success and a good income is inevitable.

Wherever you are now, you may come to the front *if you will*. But to do this, the necessities of business must take precedence of everything else,—even food and clothing,—except a respectable appearance of person and office. Cut short everything and every where else, till you have a good office well supplied. Food? why, live on potatoes and salt, if necessary,—I have done it,—and bring everything else to the same level till all the necessities and conveniences of the office are met, and you can receive patients whatever their needs, with complacency and satisfaction. A little discipline and self-sacrifice will do you good—will probably be the making of you.

The offices of a majority of dentists show down-right shiftlessness, and respectable people feel like retreating as soon as they look round, instead of feeling at ease as in a tastefully arranged parlor. And too often they feel repelled by the unprofessional appearance of the dentist, instead of being drawn toward him by his clean looks, suave manners and intelligent touch.

Away with such shiftlessness. "Study to be approved," and you will be appreciated.

But the first evidence that you take this advice will be to see that all materials and instruments and appliances are in abundance, and that you are ready for all legitimate work, even for the unexpected.

### In Extracting, Consider the Surroundings of the Teeth.

IT is well for the dentist to be quite familiar with the surroundings of the teeth, as well as with the teeth themselves. With this special knowledge, many an operator might prevent blunders.

Those who have properly studied this subject may think it child's play to go into any details; but we must bear in mind that many forget what they have been taught, and many others are benefited by being told in familiar language what they have only learned by indefinite theory.

The severe wrenching of a tooth in extracting would be avoided if the operator kept in mind that its surrounding is a network of spongy bone, instead of a solid structure like the jaw proper. True, the immediate casement of the tooth is strong bone, and so is the surface of the entire alveolus process; but within, it is a honeycomb. And tho this bone is of little use after the tooth is extracted, so far as that immediate space is concerned, yet, if it is broken, or even cracked, its absorption may so far extend to that surrounding other teeth as to do material damage.

There is no necessity for such severe wrenching as is often exerted. It is not our strongest dentists, but our most skilful, who are our most successful extractors.

By a careful study of the shape and direction of the roots, and the connection and yielding character of the surrounding casement, it will be seen that to extract a tooth requires the more gentle, judicious, dextrous movements of the forceps to dislodge it, than the violent jerking often practiced; even when skilful force is not sufficient, patience and cool judgment are more effectual and safer than the violent

movements of unreasonable passion or willful excess. Probably more teeth are broken by a dead, straight, powerful pull, than is generally supposed. Neither this nor violent wrenching is allowable.

The determination to immediately extract a tooth "when once we have hold of it," is often injudicious. When a tooth is difficult to dislodge, it may be better to leave it for the next day. Who has not had the credit of extracting a tooth that another dentist, a day or two previously, found it impossible to dislodge? And why was he successful? Not, perhaps, because he was more skilful, but because the effort of the previous dentist had produced an inflammation and breaking down of the surrounding membrane, which had caused a loosening of the tooth. From this, let us learn that sometimes a little time, after a reasonable effort to extract a difficult tooth, is better than great strength. Even a few hours, after the first effort, may make a wonderful difference, for the pericement, when severely disturbed, quite speedily takes on an exudation and partial dissolution that gives lubrication and space in the socket.

### Perversion of Words.

IN our article under *Words*, in February ITEMS, we remarked that many words did not retain their original meaning. Let us give a few examples :

*Religion* is now devotion to God as an object of worship ; in a broader sense, it is any system of spiritual faith and practice. But it is not very long ago that such a definition would have been considered an unwarrantable perversion. A hundred and fifty years ago we read only of religion as the rules and regulations of some monkery, not as the description of the piety of those within. So the monkery of Benedict or Dominic, or some other good man or saint had its peculiar religion. Therefore, taking a monastic vow was called "going into a religion," and there were as many "religious" as monastic governments.

We now speak of a *lewd* person as one devoid of virtue ; but formerly it simply referred to a common person or layman, as distinguished from the clergy.

*Frank* means now open, undisguised, candid ; but originally it was only the name of a rough, wild, northern horde of hardy German rabble that came down on the more civilized but effeminate Romans and Gauls, conquering them and usurping their government. They settled principally among the Gauls, and this country took the name of France or the country of the Franks. There was a great contrast between the duplicity, cunning and double-faced dealing of the former governing classes and these Franks ; for, tho the newcomers were rough and ferocious, they were plain-spoken, simple-hearted people ; they knew nothing of "the mysteries of diplomacy" or the craftiness of politicians, so that they were laughed at for their confiding, free and easy way. This way was called "The Frank way." The Roman custom (which also prevailed in Gaul, for the latter were vassals of the former), of confiscating all lands under various pretexts, was changed under the Franks. Every man was allotted what he could improve and the instrument giving it to him was called a franchise.

*Harlot* originally meant simply a public character, or one who kept a public house for the convenience of travelers and news-gatherers. The harlot's house on the walls of Jericho was one of these places, and the Israelitish spies resorted to it for entertainment. Gradually these public places became the resort of prostitutes, and they and the keeper were called harlots, or public characters, in a bad sense.

*Tavern* was the name given to houses for public entertainments in our Saviour's time. The sale of intoxicants was not necessarily connected with them then. Paul, on his way to Rome, when he and his company came in sight of "Three Taverns," thanked God and took courage, because of the prospect of rest from their long foot journey from the Mediterranean. Now, we are sorry to say, a tavern is generally synonymous with a public bar for the dispensing of intoxicants.

A *carriage* was, in Paul's time, a burden to be carried, not a vehicle in which to be carried. He says : "We took up our carriages, and went up to Jerusalem."

## Our Question Box.

**QUESTION 2.**—(a) When necessary to remove a large portion of dentine and enamel to obtain access to a nerve cavity, what instruments do you prefer? (b) What do you consider the best local anesthetic for the extraction of teeth, and how applied?

## ANSWERS.

(a) Chisels and barrel burs.

- (b)  $\mathcal{R}$ —Crystal carbolic acid..... $\frac{3}{4}$ j.  
 Gum camphor..... $\frac{3}{4}$ ss.  
 Chloral hydrate..... $\frac{5}{8}$ ss.

Applied to gum with cotton, or Bar's local anesthetic used as directed.

J. E. BREEDING.

(a) Brown's heroic chisels, dent. engine—straight and right angle burs.

- (b)  $\mathcal{R}$ .—Acid carb..... $\frac{3}{4}$ j.  
 Camph. gum..... $\frac{3}{4}$ ss.  
 Chloral hydrate..... $\frac{5}{8}$ ss.

M.—To thirty drops add one grain crystal mur. cocaine. Sig. Apply to gum on pledget of cotton, and wait five minutes.

WM. H. COOKE.

(a) I use enamel chisels and keen engine burs. (b) I consider cocaine hypodermically injected the most effective local anesthetic for extraction.

P. CHEANEY, D.D.S.

(a) A sharp drill. (b) Not space to answer.

L. H. HENLEY.

(a) Chisels to cut away enamel, and engine burs to remove dentine. (b) Carbolic acid and camphor gum applied to the gum adjacent to the tooth to be removed with camel's-hair brush, and after a lapse of five or six minutes remove the tooth.

C. C. HASSELL.

(a) Enamel chisels, engine and burs. (b) I know of no agent that would be a universal remedy to allay pain during the extraction of teeth, but I would use such an agent that would satisfy the minds of patients as to a good result from its application.

R. D. GRIFFIS.

(a) Enamel chisels and engine burs. (b) I consider chloroform equal, or better, than anything I have tried. Dry the gum, and apply it.

M. BRODERICK.

## The Dental College of Howard University, Washington, D. C.

**T**HIS Dental College has struggled through several embarrassments. And this is all the more to its credit, now we find it in the front ranks of dental colleges.

This success is largely through the energy of its Dean, Prof. Thomas B. Hood, tho the whole faculty are unexceptionable. They are :

Thomas B. Hood, Dean ; Charles B. Parvis, A.M., M.D., Secretary and Treasurer ; Neil F. Graham, M.D., Professor of Surgery ; Daniel S. Lamb, A.M., M.D., Professor of Anatomy ; William H. Seaman, A.M., M.D., Professor of Chemistry ; John E. Brackett, M.D., Professor of Materia Medica ; Robert Reyburn, A.M., M.D., Clinical Lecturer on Surgery ; John F. R. Dufour, M.D., D.D.S., Professor of Principles and Practice of Dentistry ; Henry L. Yeatman, M.D., D.D.S., Lecturer on Mechanical Dentistry ; G. N. Perry, M.D., on Anatomy ; Walter S. Over, D.D.S., Demonstrator in Dentistry ; T. Ellsworth Lee, D.D.S., Demonstrator in Dentistry.

The Dental College of Howard University has undoubtedly a grand future. Being at the Capital of the nation, it should take the lead ; and the liberal endowment of the University on this department gives it every facility.

Professor Hood, whose portrait we make our frontispiece, seems determined to make this college first-class in all respects. His faithfulness in the past is a guarantee for the future. Let the young men of the nation, with aspirations toward the profession, make a note of this.

### Indiana Dental "Kolledge" Commencement.

THE Indiana Dental College has just had its Eleventh Annual Commencement exercises. The diplomas were presented to the twenty-seven graduates by Dr. S. B. Brown, of Ft. Wayne, President.

The graduates were E. D. Baily, Vernon, Ind.; B. C. Brimmacomb, Ontario; A. H. Brown, Winchester, Ind.; T. E. Coffin, Thorntown, Ind.; A. M. Coffin, Thorntown, Ind.; H. L. Cormican, Waupaca, Wis.; L. A. Cox, Minneapolis, Minn.; T. H. Davidson, Indianapolis; C. E. Irvin, Princeton, Ind.; E. G. Fry, Greencastle, Ind.; R. Bruce Gentle, Southport, Ind.; F. B. Gonzales, Delphi, Ind.; E. H. Green, Minneapolis, Minn.; J. H. Hess, Columbus, Ind.; N. F. Hazelett, Rossville, Ind.; G. Edwin Hunt, Indianapolis; B. W. Jones, Ypsilanti, Mich.; E. H. Keith, Rhineland, Wis.; W. W. Mungen, Ft. Wayne, Ind.; C. A. Rowand, Richmond, Ohio; R. W. Reese, Thorntown, Ind.; B. W. Joker, Paris, Ill.; G. W. Tainter, St. Louis, Mo.; E. R. Trippe, Elkhorn, Wis.; Will L. Tevis, Indianapolis; G. W. Thompson, Franklin, Ind.; H. B. Tucker, Cecero, Ind.

Following the parchments came many handsome bouquets from friends of the new-fledged dental doctors.

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The Ohio College of Dental Surgery.—From the following list of graduates, it will be seen that this College has had a successful year: Frank Ehret Adams, Ohio; Benjamin Quict Ayres, Ohio; Edmund George Beal, Pennsylvania; Michael August Becker, Ohio; Harry Ruthven Bell, Ohio; Willie Morton Bogue, Indiana; Carl Edward Booren, Minnesota; Homer C. Brown, Ohio; Stephen Abner Brown, Pennsylvania; Dalton C. Cunningham, Pennsylvania; Charlie C. Carle, Ohio; William James Crampton, Canada; Fred. Leslie Cauch, California; James Hamilton Clark, Ohio; Herbert Everett Crocker, Connecticut; Isaac Stanton Carter, West Virginia; Jacob Jones Donaldson, Pennsylvania; Sidney Allen Donaldson, Kentucky; Max M. Eble, Kentucky; Adolph Eicke, Germany; Bartlett Joseph Emery, Ohio; Hampton Geiger, Ohio; Hugh Peebles Gillispy, New York; W. Ohmer Girardey, Ohio; William Clifford Griffith, Ohio; Daniel Ephram Hartwell, Indiana; W. Howard Hayden, Ohio; Charles Lee Hill, Ohio; William Henry Houser, Ohio; Abraham Gantz Herr, Michigan; Virgil Newton Jones, West Virginia; William Irwin Jones, Ohio; Isaac Edward Josephis, Pennsylvania; Atsuhiko Katayama, Japan; Samuel Dora Laughlin, Kentucky; James William Leahy, Ohio; Allen Joseph Lee, Kentucky; Richard Morgan, Jr., Missouri; Fermine Engle Morgan, Ohio; John Gilpin Macy, Ohio; Russell McClanahan, Indiana; Horace Edwood McClelland, Ohio; Thomas Harris McClure, Pennsylvania; James Elmo Nichols, Canada; James Gilmore Parr, Ohio; Clarence Courtland Pollitt, Kentucky; J. Harbin Pollock, Ohio; Adam Burr Purdy, Canada; Elmer W. Ream, Indiana; Charles Lawrence Rose, Minnesota; Frank Stanley Rose, Canada; Moritz Carl Saul, Germany; Franklin N. Seeley, Ohio; Lewis S. Seeley, Ohio; James Wilbur Shane, Ohio; Charles Frederick Shober, Canada; J. August Shober, Canada; Albert Sidener, Ohio; James A. Sinnet, Ohio; Moses Shobe Smith, Kansas; Claude Henry Thompson, Ohio; William H. Wernett, Ohio; Lorne Wilkie, Michigan; Edwin John Witherspoon, Michigan; Bayard Alvin Wright, Pennsylvania; J. F. Cope, Pennsylvania.

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The Columbian University, Dental Department, has just graduated five students: S. B. Cassin, C. M. O'Leary, J. T. Reid and T. W. Stubblefield, of the District of Columbia, and Jessie Kappeler, of England.

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The Penn. College of Dental Surgery has had a successful year. Its graduates number seventy-six, which means that number of efficient members added to the Dental Profession, for the old Pennsylvania may well be proud of the after-record of her students. Its class of matriculates is unprecedentedly large—287.

The Chicago College of Dental Surgery, dental department of Lake Forest University—eighth session—has had an unusually prosperous year. The following are its list of graduates: Charles Edward Austin, B. S., Frederick Douglas Axton, James Down Banes, Daniel Wesley Bottorf, John Henry Chase, Joseph William Dostal, William Edward Emmons, L. D. S., Harvey Everett Follansbee, Obe Edward Gibson, Linneaus Melbourn Goodearle, Earl Eylon Gould, Frank Albert Green, Edwin Grant Howard, Frank Sylvester Heer, Will Lloyd Jones, Richard Kempter, Halbert Eaton Kinney, Frank Kolar, George Wilson Toles, Ernest Lincoln Knapp, Frank Ambrose Lane, James Truman Lennington, Michael Leininger, Charles Beatty Magill, James Ralph Maguire, George Bruce Martin, Almon Green Moffett, James Doyle Moore, Joseph Gregory Pflaff, Guy M. Phelps, M. D., John James Pountain, Harry Monroe Prickett, John Willett Putnam, Frederick Kent Ream, Edmund Walter Russell, Otto August Ruthenberg, Charles Carver Ryan, Grant John Roberts, Allan Benjamin Fernald, Fenwick Earl Salisbury, Frank Steece Schadel, James Adam Shoemaker, Albert Gustave Seeglit, Jacob Hamlin Smyser, Melvin Wellington Swartz, Frederick Richard Suggitt, Lewis Solomon Tenny, Frederick Solomon Tinslar, Cornelius Nicholas Trompen, Rollin Brode Tuller, Orrin Thompson, James Lincoln Ubellar, John Quigley Waddell, Charles Herbert Waterhouse, M. D., Charles Edward White, Herbert Cameron West, William Henry Conrad Wiesler, Charles Augustus Whitenack, Edward Everett Williams, George Edwin Ziun, B. S.

Program of St. Louis Dental Society for 1890.—Here is a program that shows enterprise:

May 6th.—Dr. M. C. McNamara, "Preservation of Natural Teeth, by his own Method."

May 20th.—Dr. Wm. Conrad, "Removing Broken Instruments from Root Canals."

June 3d.—Dr. DeCoursey Lindsay, "Soft Foil."

June 17th.—Dr. A. H. Fuller, "Professional Ethics."

July 1st.—Dr. Geo. Robitoy, "Contour Fillings."

September 16th.—Dr. E. S. Ullman, "Neuralgia."

September 30th.—Dr. John J. R. Patrick, "Follies in Dentistry."

October 21st.—Dr. Henry Fisher, "Practical Dentistry."

November 4th.—Dr. John G. Harper, "Porcelain, and Porcelain Faced Crowns."

November 18th.—Dr. J. B. Newby, "Dentistry; Past, Present and Future."

December 2d.—Dr. A. J. Prosser, "Dental Education."

December 16th.—Annual Dinner.

Members to open the discussion will be selected by the essayists.

The Siens ov Speling bī Stori'z sistm, adopted bī The United Stāts Fonelik Kumpani, Chikāgo, Ill.

This iz the prinsipl sistm now befōr Kongres. It iz propōzd to opn eksperimentl skūlz undr the kār ov the Govrnment, in diferent sitiz, to giv a praktikl test ov its wrth.

It adz fōrtēn letrz to our prezent alfabet, so that the nu alfabet kontānz forti letrz, korisponding to the forti elementari soundz ov our languaj. It klāmz, with the adishun ov thrē mōr letrz, to b a univrsal alfabet.

It iz a veri komplēt and sientifik sistm—veri komprehensiv and yet simpl, adapted to the merest child, and yet ansering al the demandz ov the ripest skolr. Bī al mēnz, send to the Sekretari, "Charles A. Story, Chicago, Ill.," for a kopi, wehthr u r konvinst ov the nesesity ov fonetik speling or not. It iz tō important a subjkt to b ignōrd bī enī intelijent man.

The stīl ov speling we r ūzing in this notis iz not fonetik, it iz onli a step toard it. It iz much betr than the speling in komn, use but pūr fonetiks is the gūl toard, which evri efort shūd tend.



The answer to our poetic riddle in April ITEMS is *whale*, as several correspondents have guessed.

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The Fluid of the Oxyphosphate should be comparatively fresh. If it is not the mixture is apt to crumble in manipulating, is slower setting, and is not as durable. If, therefore, you find either of these difficulties, you had better send for fresh fluid.

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The Nebraska Dental Society will meet in Omaha, on the twentieth of May. All made welcome. A good program is prepared.

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The fourteenth annual meeting of The Nebraska State Dental Society will be held at Omaha, May 20-23.

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The Texas Dental Association comes out with an extra program this year. "How we grow," seems to be written on every thing that pertains to Texas. It meets at Belton, May 6th.

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The State University of Iowa, Dental Department, had a fine class of forty graduates this year, and the unprecedented number of one hundred and twenty matriculates. Everything went off charmingly.

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The Central Dental Association of New Jersey held their last meeting at the office of S. & J. Davis, 943 Broad street, Newark, N. J., Monday, April 21, at 8 P. M. Supper was served at 6.30.

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The Ohio College of Dental Surgery had a successful year at their last session. There were 161 Matriculates, and 66 Graduates. Dr. B. A. Wright, of Pennsylvania, was accredited with the best *General Examination*; Dr. R. McClanahan, of India, was best in Operative Dentistry; and Dr. A. G. Herr, of Michigan, best in Anesthetics.

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South Carolina Dental Association meets in Charleston, Tuesday, May 13. We judge, from the program, it is going to be a session of extra interest. These Southern societies are working ahead wonderfully; quietly, but surely. New England and the Middle States will have to look out for their laurels, or they will certainly lose them.

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The Missionary Review of the World is one of the most interesting and instructive missionary journals we have ever read. The breadth of view it takes, the familiarity it shows with all missionary enterprises, its ability in discussing missionary problems, and the well-digested views it gives, makes it the leading missionary magazine of the day.

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LINCOLN, ILL., March 20th, 1890.

Some years ago I wrote you, "I have used your G. and P. Alloy for the past seven years, and I recommend it above all others. I have tried them all in practice, and by the test tube."

This is not a whit too strong. I am well satisfied. I can show fillings placed five and six years ago that look as well as if in only a few months. I never polish an alloy filling, but finish immediately with bib-paper on approx sides, top, or grinding surface with bits of *spunk* cut square, making a stipple surface burnishing, as it were, to proper shape and form, leaving it a dead white, which will not discolor, but remain bright for years. Try this in mouths where you have, say, filling in lower molars on each side; polish one in the usual way, stipple the other, and observe the difference months afterward.

Courteously yours,

R. N. LAWRENCE.

## *Miscellaneous.*

### A Dangerous Prescription Corrected.

EDITOR MEDICAL WORLD :—Having noticed the prescription for toothache given in the January issue of THE MEDICAL WORLD, page 41, a D. D. S. wishes to suggest to the M. D's., that alveolar necrosis may result if a mixture containing arsenic is carelessly placed in the cavity of a tooth. Substitute acetate of morphia, and let the prescription read :

R Acetate of morphia.....	10 grains.
Muriate of cocaine.....	15 "
Crystallized menthol.....	3½ "
Glycerine.....	2 dr.

And the general practitioner will have an excellent remedy for odontalgia caused by pulpitis.

Philadelphia, Pa.

D. D. S.

**Celestial Dentistry Again.**—We cannot vouch for the actual truth of the following, because we are not on speaking terms with the "heathen Chinees" in question, but we think that if he can do a "good business" in New York, in the face of that city being pretty well set up by first-rate men using first-rate instruments, he must be a rather remarkable Oriental.

A Chinese dentist, recently arrived in New York, is doing a good business there. A curious visitor found that his methods, as well as the instruments used, were very primitive, yet he did his work like a genius. There was no easy-chair, nor the usual convenient little operating table alongside of the dentist. The patient sat upon a common camp-stool, and there was a smaller stool of the same height for the foot of the dentist to rest on. The head of the patient was occasionally brought on the elevated knee of the doctor, and on the latter's right hand was his operating case, containing curious and quaint instruments. The rapidity with which the Celestial extracted a decayed tooth, somewhat astonished the visitor. By close observation it was discovered that a liquid preparation of a whitish substance was first put on the doomed tooth to deaden the pain and to loosen the root of the tooth. The filling of the cavities was accomplished with like rapidity, with a substance which looked like tin-foil.—*The British Journal of Dental Science.*

**Bill Nye on Elixir of Life.**—Many curious experiments were made in Paris by Dr. Brown-Séguard in the early stages of his elixir experience, according to the local physicians there. Most of these experiments were made on animals. He was greatly gratified. Into the foreleg of an old horse, that was so worthless on account of age, that in another day he would have been in the soup—the mock-turtle soup of Paris—he injected his elixir. In an hour afterward, with bright red nostril and tail neatly draped over the dashboard, he sailed up the Shonz Eleeza knocking spokes out of valuable carriages all the way up to the Arc of Triumph, where he chipt out about five cents' worth of the corner of that great work, and piled up Dr. Brown-Séguard in a chaos of clothes and contusions. His first anxiety was to find out, of course, whether the hyphen had been knocked out of his name. Finding that it had not, he returned to his experiments. He also secured an old dog, with thick hearing and pronounced flagging of mental powers. The dog was so old that he had forgotten everything, and so blind that a French soldier in red gored trousers did not startle him. After a dose of the elixir, he wagged his tail, a thing he had not done for years. Then he yawned and ate some grass. He then noticed a cat on the lawn, that had grown old with him, but had not had a nip of the elixir. In two minutes he had her quivering remains on the grass. By four o'clock he was back to puppyhood, and had chewed up Dr. Brown-Séguard's white gaiters, a pair of lace curtains and a child.—*Luminary.*

**Iodine for Rattlesnake Bite.**—DEAR DOCTOR : In a late issue of the *Advocate* I noticed an article on "Remedies for Snake Bite," setting forth olive oil and ammonia as good and safe remedies. As to the virtues of olive oil, I know nothing as touching snake bites. Ammonia is good when you can get nothing better; but I write this to say that tincture of iodine is a specific in this trouble. If you can get it in time, apply in full strength to the wound, and give the patient one to five drops in water every ten minutes, for, say an hour, or until improvement sets in; then lengthen out to an hour. Some fifteen years ago, I was called to treat a dangerous case of snake bite, where the whisky remedy had been faithfully tried, and had failed, and my patient was fearfully swollen, and appeared near dying.